



SHERWOOD INDUSTRIES IS AN ENVIRONMENTALLY RESPONSIBLE COMPANY. THIS MANUAL IS PRINTED ON RECYCLED PAPER.

PLEASE KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE



Cara DR

BY: SHERWOOD INDUSTRIES LTD

OWNER'S MANUAL

INSTALLER:

Leave this manual with the appliance.

CONSUMER:

Retain this manual for future reference.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapours and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Open windows/extinguish any open flame.
- Do not try to light any appliance.
- Do not touch any electrical switch or use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

This appliance may be installed in an after-market permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.



WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier.



Massachusetts installations (Warning): This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts. Other Massachusetts code requirements: Flexible connector must not be longer than 36in., a shut off valve must be installed; only direct vent sealed combustion products are approved for bedrooms/bathrooms. A carbon monoxide detector is required in all rooms containing gas fired direct vent appliances.

SAFETY PRECAUTIONS

FOR SAFE INSTALLATION AND OPERATION OF YOUR “ENVIRO” HEATER, PLEASE CAREFULLY READ THE FOLLOWING INFORMATION:

- All ENVIRO gas-fired appliances must be installed in accordance with their instructions. Carefully read all the instructions in this manual first. Consult the building authority having jurisdiction to determine the need for a permit prior to commencing the installation.
- **NOTE:** Failure to follow these instructions could cause a malfunction of the fireplace, which could result in death, serious bodily injury, and/or property damage.
- Failure to follow these instructions may also void your fire insurance and/or warranty.

GENERAL

- Installation and repair should be done by a qualified service person. The appliance should be inspected before the first use and, at least, annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative the control compartments, burners and circulating air passageways of the appliance be kept clean.
 - Due to high temperatures, the appliance should be located out of high traffic areas and away from furniture and draperies.
- Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burn or clothing ignition.**
- Young children should be carefully supervised when in the same room as the appliance.
 - Clothing or other flammable materials should not be placed on or near the appliance.

FOR YOUR SAFETY

- Installation and service must be performed by a qualified installer, service agency or gas supplier.
- This installation must conform to local codes or, in the absence of local codes, to the current CAN/CGA-B149 installation code (Canada) or National Fuel Gas Code ANSI Z223.1.2 (USA)

- To prevent injury, do not allow anyone who is unfamiliar with the stove to operate it.

• To prevent injury, if the pilot or pilot and burners have gone out on their own, open the glass door and wait 5 minutes to air out before attempting to re-light the stove.

- Always keep the area around these appliances clear of combustible material, gasoline and other flammable liquids and vapours.
- These appliances should not be used as a drying rack for clothing or for hanging Christmas stockings/decorations.
- Due to the paint curing on the stove, a faint odor and slight smoking will likely be noticed when the stove is first used. Open a window until the smoking stops.

Always connect this gas stove to a vent system and vent to the outside of the building envelope. Never vent to another room or inside the building. Make sure the specified vent pipe is used, properly sized and of adequate height to provide sufficient draft. Inspect the venting system annually for blockage and signs of deterioration.

WARNING: Failure to position the parts in accordance with the diagrams in this booklet, or failure to use only parts specifically approved with this appliance, may result in property damage or personal injury.

WARNING: Do not operate with the glass front removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person.

- Never use solid fuels such as wood, paper, cardboard, coal, or any flammable liquids, etc., in this appliance.
- Do not use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control or gas control systems that have been under water.
- Do not abuse the glass by striking it or slamming the door shut.

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CODES AND APPROVALS

DIRECT VENT ONLY: This type is identified by the suffix DV. This appliance draws all of its air for combustion from outside the dwelling, through a specially designed vent pipe system.

REAR VENT DV Certified for installation from 0-2000 ft (0-610 m).

In the USA: The appliance may be installed at higher altitudes. Please refer to your American Gas Association guidelines which state: the sea level rated input of Gas Designed Appliances installed at elevations above 2000 (610 m) feet is to be reduced 4% for each 1000 feet (305 m) above sea level. Refer also to local authorities or codes which have jurisdiction in your area regarding the de-rate guidelines.

In Canada: When the appliance is installed at elevations above 2000 feet (1372 m), the certified high altitude rating shall be reduced at the rate of 4% for each additional 1000 feet (305 m).

- This appliance has been tested by INTERTEK (**Warnock Hersey**) and found to comply with the established VENTED GAS FIREPLACE HEATER standards in CANADA and the USA as follows:

VENTED GAS FIREPLACE HEATER (Cara DR DV; NG/LPG)

TESTED TO: ANSI Z21.88a-2003/CSA 2.33a-2003 VENTED GAS FIREPLACE HEATERS

CSA P.4.1-02 TESTING METHOD FOR MEASURING ANNUAL FIREPLACE EFFICIENCY

This ENVIRO Cara DR Fireplace:

- Has been certified for use with either natural or propane gases. (See rating label.)
- Is not for use with solid fuels.
- Is approved for bedroom or bed sitting room. (**IN CANADA:** must be installed with a listed wall thermostat. **IN USA:** see current ANSI Z223.1 for installation instructions.)
- Must be installed in accordance with local codes. If none exist, use current installation code CAN/CGA B149 in Canada or ANSI Z223.1/NFPA 54 in the USA.
- Must be properly connected to an approved venting system and not connected to a chimney flue serving a separate solid-fuel burning appliance.

IMPORTANT NOTICE (Regarding first fire up): When the unit is turned on for the first time, it should be turned onto high without the fan on for the first 4 hours. This will cure the paint, logs, gasket material and other products used in the manufacturing process. It is advisable to open a window or door, as the unit will start to smoke and can irritate some people. After the unit has gone through the first burn, turn the unit off including the pilot, let the unit get cold then remove the glass door and clean it with a good gas fireplace glass cleaner, available at your local ENVIRO dealer.

NATIONAL
FIREPLACE
INSTITUTE®



CERTIFIED

www.nficertified.org

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

SPECIFICATIONS

WARNING:

Operation of this heater when not connected to a properly installed and maintained venting system can result in carbon monoxide (CO) poisoning and possible death.

RATING LABEL LOCATION:

The Rating Label is located on the inside surface of the pedestal control door.

DIMENSIONS:

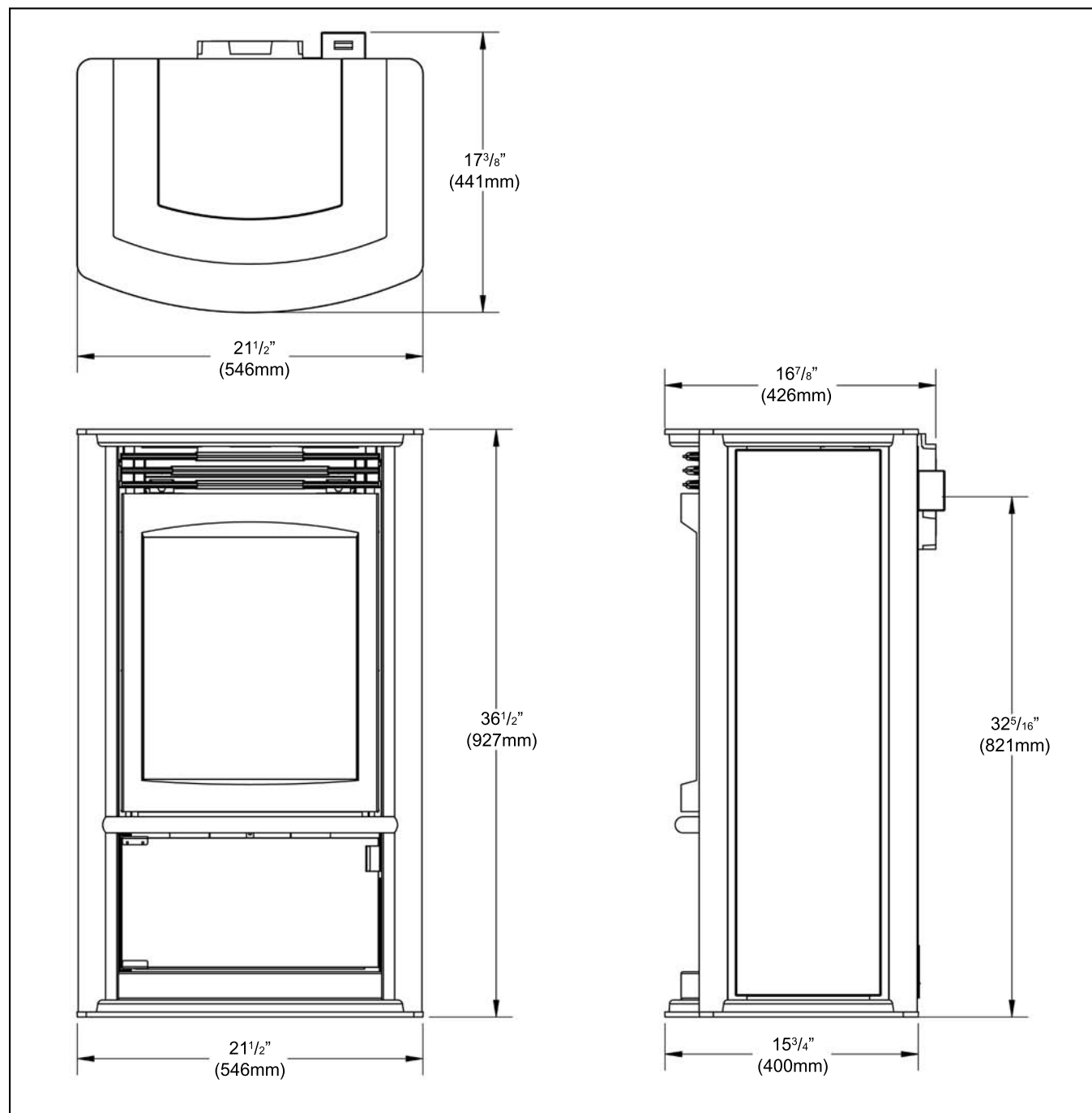


Figure 1: Cara DR Exterior Dimensions.

OPERATING INSTRUCTIONS

For Your Safety, Read Safety Precautions And Lighting Instructions Before Operating.

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY A FIRE OR EXPLOSION MAY RESULT, CAUSING PROPERTY DAMAGE, PERSONAL INJURY OF LOSS OF LIFE.

PILOT LIGHTING INSTRUCTIONS:

CAUTION: Hot while operating. Do not touch, severe burns may result.
Keep children, clothing, furniture, gasoline or other flammable vapors away.

CAUTION: Do not operate this fireplace with the glass removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified person! This appliance needs fresh air for safe operation and must be installed with provisions for combustion and ventilation air. See installation and operating instructions manual. Keep burner and control compartment clean.



WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage, or loss of life. Refer to owner's manual provided with this appliance. See installation and operating instructions accompanying appliance. Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

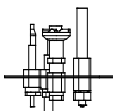
FOR YOUR SAFETY READ BEFORE OPERATING


WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

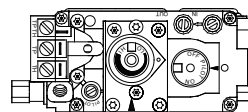
- A) This appliance is equipped with a pilot, which must be lit by hand by following these instructions exactly.
- B) BEFORE LIGHTING smell all around the appliance area for gas and next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:
Do not try to light any appliance. Do not touch any electrical switch: do not use any phone in your building. Immediately call your gas supplier from a neighbor's phone. Follow the gas suppliers instructions. If you cannot reach your gas supplier, call the fire department.
- C) Use only your hand to push in or turn the gas control knob; NEVER use tools. If the knob will not push in or turn by hand, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D) Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
 2. Turn off all electrical power to this appliance.
 3. Turn off the gas control knob clockwise  to the off position.
 4. Open door. Wait five (5) minutes to clear out any gas. Close door. If you smell gas STOP! Follow "B" in the above safety information. If you do not smell gas go to the next step.
 5. Find pilot-located to the left behind the side log.
- Turn the gas control knob counter-clockwise  to "PILOT". Push the gas control in fully and hold, keep knob depressed for about 30 seconds after the pilot is lit. Release knob. If pilot goes out, repeat steps 4 through 5.



- WARNING: This gas valve has a lockout device, which will not allow the pilot burner to be relit until the thermocouple has cooled. If the knob does not pop up when released, stop and immediately call your service technician or gas supplier. If the pilot does not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
6. Turn the gas control knob counter clockwise  to the "ON" position. Flip the burner switch to "ON" THEN TURN THE "HI/LOW" knob to the desired setting.
 7. Turn on the electrical power to the unit.



TO TURN OFF GAS TO APPLIANCE

1. Flip burner switch to "OFF"
2. Turn the gas control knob clockwise  to the "OFF" position.
3. Turn off all electrical power to the appliance if service is to be performed.

Figure 2: Lighting Instruction Label.

1. Turn off the gas to the fireplace. **If not recently done, remove the door and let the unit air out for at least five (5) minutes to clear out any gas.** Turn on gas to the heater. Leak test all joints with soapy water. **NEVER USE OPEN FLAME FOR LEAK TESTING.**
2. Start the pilot by pressing the gas control knob and turning it to PILOT. While holding the gas control knob in, press the piezo ignitor several times until the pilot light starts. Hold the gas control knob in for 30 seconds. Check that the pilot has fully engulfed the thermocouple assembly (refer to Figure 6).
3. Start the main burner by turning the gas control knob to ON and then turn the rocker switch to ON. Check that all burner ports have flame.
4. Leak test all gas joints again.

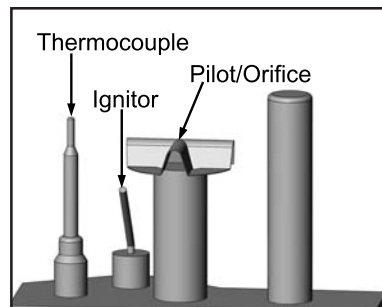


Figure 3: Pilot Assembly.

OPERATING INSTRUCTIONS

**For Your Safety, Read Safety Precautions
And Lighting Instructions Before Operating**

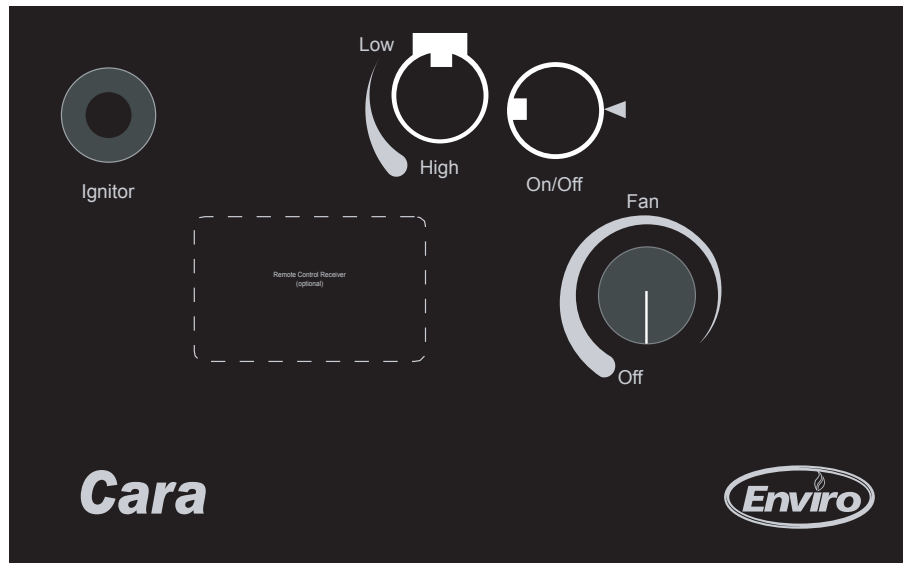


Figure 4: Cara DR Control Panel.

AIR SHUTTER:

The air shutter is controlled by sliding the air shutter adjustment screw (shown in Figure 5) either forwards or backwards. The adjustment screw, for the primary air, is located on the bottom of the firebox. The air shutter nut can be accessed by removing the control panel. This is best done during the initial installation.

Sliding the shutter forwards increases the primary air while sliding the shutter backwards decreases the primary air.

The air shutter allows the amount of air coming into the fireplace to be adjusted in order to accommodate different climates and venting arrangements. Start the pilot and then the burner. Make sure the pilot flame is burning normally and none of the burner ports are plugged. Let the fireplace burn for roughly fifteen (15) minutes and then examine the flames, compare the flames to Figure 43 or Front Cover.

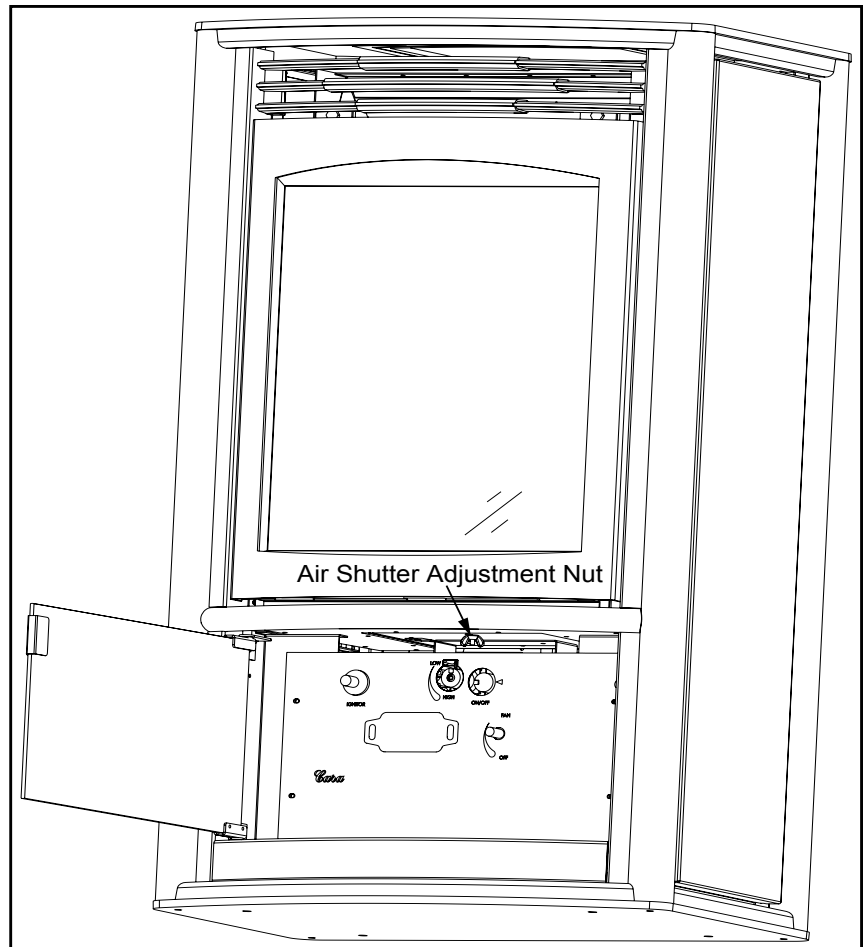


Figure 5: Air Shutter Adjustment.

OPERATING INSTRUCTIONS

For Your Safety, Read Safety Precautions And Lighting Instructions Before Operating

The ideal flame will be blue at the base and light orange above. The flames should be of medium height. If the flames look like this (refer to Figure Figure 43 or Front Cover), no adjustment is needed. If the flames are fairly short and mostly blue, the fireplace is getting too much air. Therefore, the air shutter should be closed slightly until the correct flames are achieved. Flames that are very orange, with tall, dark, stringy tips, are not getting enough air. Open the air shutter until the flames clean up. If the shutter is opened, or closed all the way, and the correct flames cannot be attained, turn off the gas and contact the dealer.

Warning: Incorrect air shutter adjustment may lead to improper combustion, which is a safety hazard. Contact the dealer if there is any concern about the venturi adjustment.

Table 1: Air Shutter Setting Information.

	Natural Gas	Propane
Amount Air Shutter is Open	¼" (6mm) minimum	Completely Open

REMOTE CONTROLS (OPTIONAL):

This fireplace can use an optional remote control or an optional cordless wall thermostat. If either of these are to be used to control the fireplace for the majority of the time, leave the ON/OFF switch (on the rear of the unit) in the "ON" position. Consult the instructions included with the remote/wall thermostat for operation guidelines.

BLOWER SPEED (OPTIONAL):

The blower will come on only when the fireplace is up to temperature (approximately 12 minutes with unit on high). When installed, the blower is equipped with a variable fan controller, located in the front control panel. This control will adjust the fan speed from high to low or turn the fan off.

NORMAL SOUNDS DURING OPERATION:

Table 2: Normal Sounds

Component	Sound & Reason
Cara	Creaking when heating up or cooling down.
Burner	Light pop or poof when turned off; this is more common with LP units.
Temperature Sensor	Clinking when it senses to turn the blower on or off.
Pilot Flame	Quiet whisper while the pilot flame is on.
Blower / Fan	Air movement that increase and decreases with the speed of the blower. The blower is pushing the heat from the fireplace into the room.
Gas Control Valve	Dull click when turning on or off, this is the valve opening and closing.

MAINTENANCE AND SERVICE

ROUTINE MAINTENANCE:

At least once a year, run through the following procedures to ensure the system is clean and working properly. Check the burner to see if all the ports are clear and clean. Check the pilot to make sure it is not blocked by anything. The pilot flame should be blue with little or no yellow on the tips.

Warning: Clearances must be sufficient to allow access for maintenance and service

Warning: Failure to position the parts in accordance with this manual, or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

The venting system must be periodically examined; it is recommended the examination is done by a qualified agency.

CLEANING THE PAINTED SURFACES:

Painted faces should be wiped with a damp cloth periodically.

CHECK PILOT AND BURNER FLAMES:

Periodically do a visual check of the pilot flames. One flame should encompass the ignitor and thermocouple and the other should burn over the burner ports (see Figure 6). Also check that the burner is operating correctly, refer to Figure Figure 43 or Front Cover.

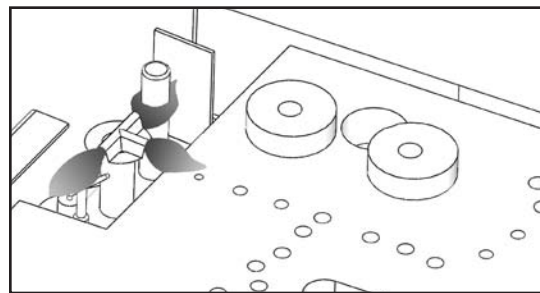


Figure 6: Pilot Flame.

GLASS DOOR REMOVAL:

IMPORTANT: If the door is not engaged properly on the hooks, damage to the fireplace and/or floor, personal injury, or even death may occur.

1. Turn the unit off and wait until it has cooled down.
2. Remove the cast iron louvers from above the door by lifting the louvers up and out.
3. Pull the two (2) door hooks, on top of the door, forward and up (see Figure 7).
4. Lift the glass door assembly straight up and out.

Ensure the door is properly fastened before attempting to light the appliance. To re-installing the glass door, slide the three (3) door hook slots, on the bottom of the door, over the three (3) door hooks on the unit. Pull the two (2) door hooks, on top of the door, forward and slide them into the two (2) door hook slots.

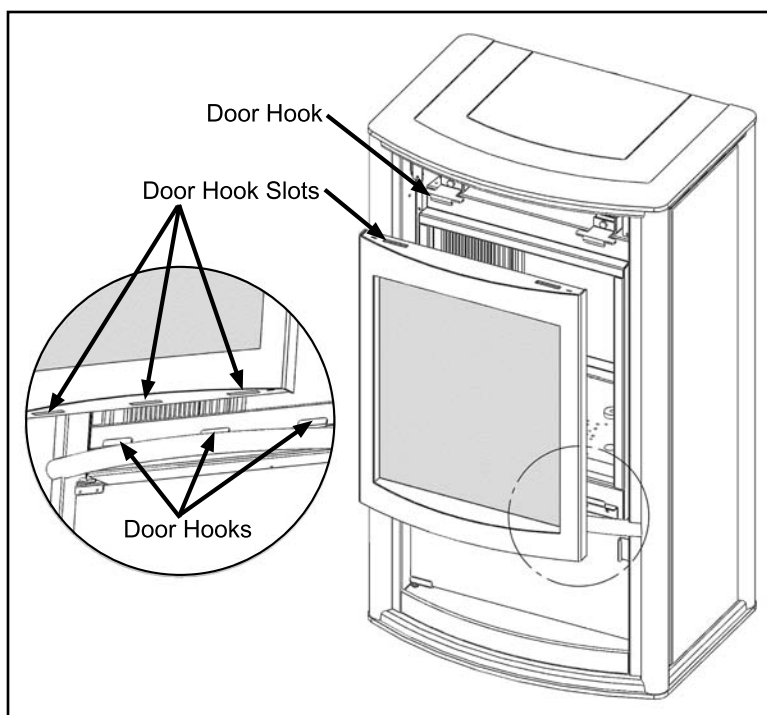


Figure 7: Door Removal / Installation.

MAINTENANCE AND SERVICE

REPLACING THE GLASS:

IMPORTANT: Do not operate with the glass front removed, cracked or broken. The glass in the fireplace is a high temperature ceramic. If the glass is damaged in any way, a factory replacement door is required (see PARTS LIST). Wear gloves when handling the damaged glass door assembly to prevent personal injury. When the glass door assembly is being transported, it must be wrapped in newsprint and tape and/or a strong plastic bag. Removal and replacement of the glass from the door **must** be done by a licensed or qualified service person. The door assembly **must** be purchased from an ENVIRO dealer. No substitute materials are allowed.

CLEANING THE FIREBOX:

With the fireplace at room temperature, carefully remove the logs. Gently remove the ceramic burner and place on a paper towel. Vacuum the bottom of the firebox thoroughly. Carefully clean any dust off the logs and remove any lint from the burner and pilot. At this time, inspect the burner pan for cracking or severe warping. If a problem is suspected, contact the dealer. Check the logs for deterioration or large amounts of soot; a small amount on the bottom side of the logs is normal. Replace the logs as in the Log SET INSTALLATION section.

BURNER REMOVAL & INSTALLATION:

IMPORTANT: Ensure the unit is off and at room temperature.

To remove the burner:

1. Remove the glass door as shown in the MAINTENANCE AND SERVICE - GLASS DOOR REMOVAL.
2. Carefully remove the log set.
3. Slide the burner back just far enough so the front edge of the burner does not catch on the front lip of the firebox.
4. Lift the front of the burner up and out of the firebox.

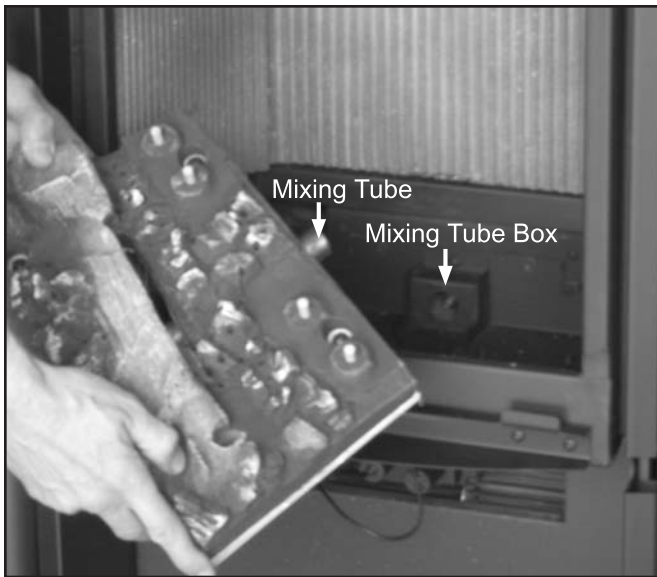


Figure 8: Install the Log Set Burner to the Firebox.

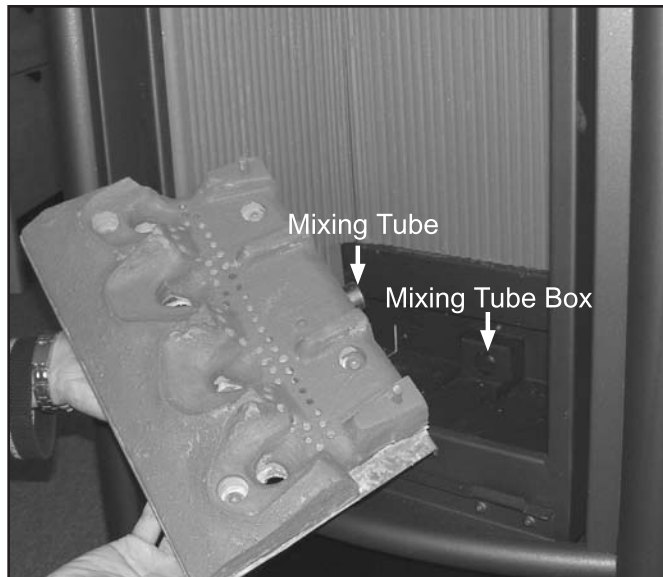


Figure 9: Install the Rock Set Burner to the Firebox.

MAINTENANCE AND SERVICE

To install the burner:

1. Insert the mixing tube into the mixing tube box (refer to Figure 8 or 9).
2. When the burner is resting in the firebox ensure that the front edge of the burner is lined up with the front lip of the firebox (see Figure 10 or 11).
3. Re-install the log set or rock set (see **SECONDARY INSTALLATION - LOG SET INSTALLATION** or **SECONDARY INSTALLATION - ROCK SET INSTALLATION**) and the door.
4. Check burner for proper operation.

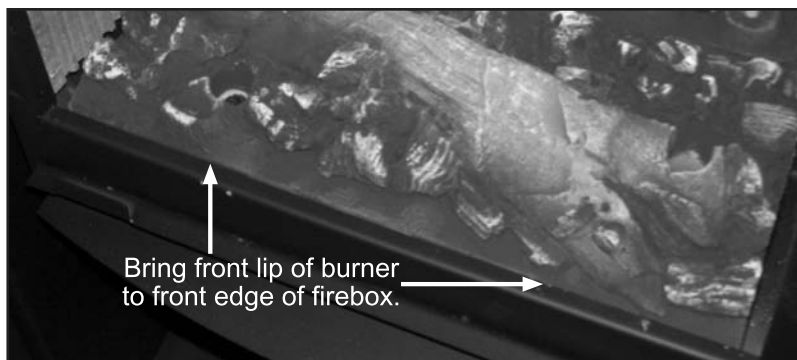


Figure 10: Align Log Set Burner With Firebox.

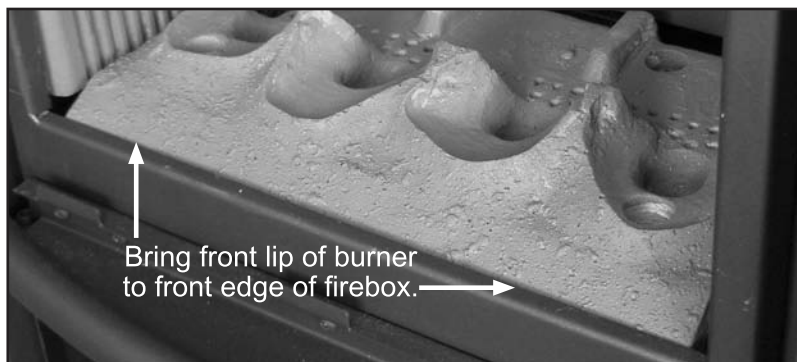


Figure 11: Align Rock Set Burner With Firebox.

FIREBOX BAFFLE REMOVAL:

The firebox baffle can be removed when cleaning the venting pipe.

1. Remove the glass door as shown in the **MAINTENANCE AND SERVICE - GLASS DOOR REMOVAL**.
2. Remove the two (2) Torx T-20 screws holding the front of the firebox baffle in place (refer to Figure 12). **IMPORTANT:** The baffle should be held in place when the screws are removed to prevent it from falling, which could damage the firebox liner, log set, or rock set.
3. Carefully push the back of the baffle up while pulling the front down (see A's in Figure 13) then pull the baffle out of the firebox.
4. Re-install the firebox baffle and the door when done.



Figure 12: Firebox Baffle Screws Removal.

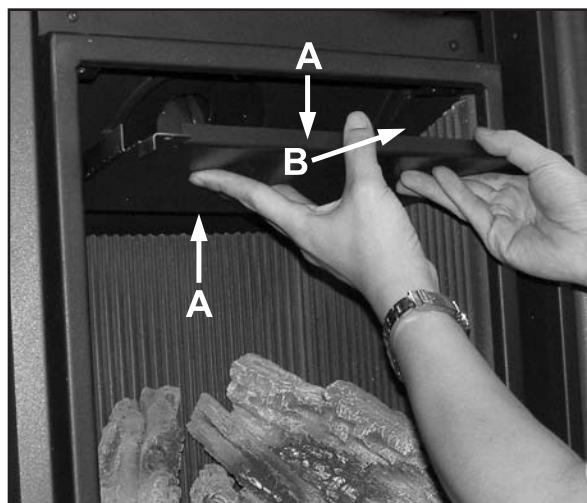


Figure 13: Firebox Baffle Removal.

MAINTENANCE AND SERVICE

FUEL CONVERSION:

TO BE INSTALLED BY A QUALIFIED SERVICE AGENCY ONLY

Please read and understand these instructions before installing.

Warning: This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper or complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

Kit Parts List:

Orifice (NG - PO512-42 DMS or LP - PO512-54 DMS)

Installation instruction sheet

Carefully inspect all parts supplied with this conversion kit. If any parts have been damaged or are missing, contact your dealer, distributor or courier company to have them replaced before starting this installation.

Conversion Kit Installation:

1. Turn control knob on the gas valve to the "OFF" position and shut the gas supply off at the shut-off valve upstream of the unit. CAUTION: The gas supply must be shut off prior to disconnecting the electrical power and before proceeding with the conversion. Allow the valve and unit to cool down to room temperature.
2. Remove the glass door as shown in the MAINTENANCE AND SERVICE - GLASS DOOR REMOVAL.
3. Carefully remove the log set.
4. Slide the burner back just far enough so the front edge of the burner does not catch on the front lip of the firebox. Lift the front of the burner up and out of the firebox. See MAINTENANCE AND SERVICE - BURNER REMOVAL & INSTALLATION.
5. Convert the burner orifice:
 - a) Remove the main burner orifice with a $\frac{3}{8}$ " socket (refer to Figure 14).
 - b) Install the alternate orifice from the kit.
6. Convert the pilot injector:
 - a) Loosen the pilot stem a half turn using a $\frac{7}{16}$ " wrench (refer to Figure 15).
 - b) Slide the tab to the other side of the pilot stem (refer to Figures 16 & 17).
 - c) Tighten the pilot stem.



Figure 14: Removing the orifice.

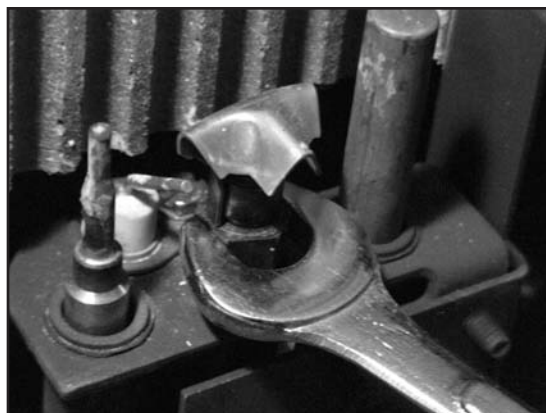


Figure 15: Turning Pilot Stem.

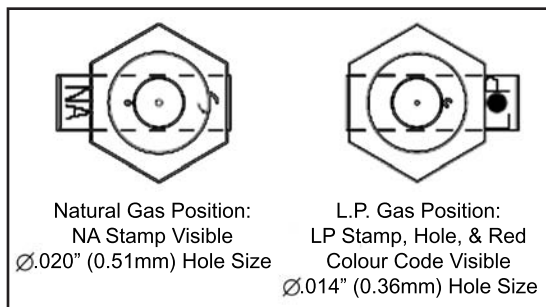


Figure 16: NG & LP Gas Positions on Pilot.

MAINTENANCE AND SERVICE

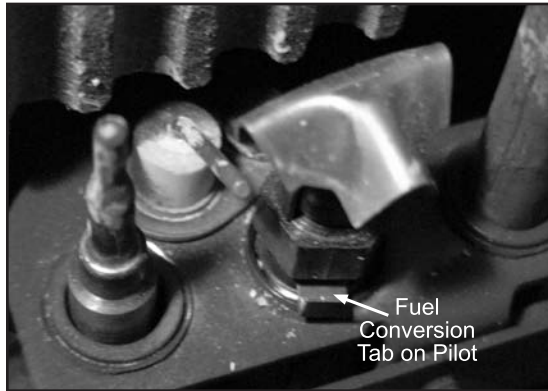


Figure 17: Fuel Conversion Tab on Pilot.

7. Convert the SIT gas valve:
 - a) Remove the extension knobs from the valve.
 - b) Remove the black protection cap from the HI/LO knob by hand shown in Figure 18.
 - c) Insert a $\frac{5}{32}$ " or 4 mm Allen wrench into the hexagonal key-way of the screw (see Figure 19), rotate it counter-clockwise until it is free and extract it.
 - d) Check that the screw is clean and if necessary remove dirt.
- e) Flip the screw (refer to Figure 20).
- f) Using the Allen wrench as shown in Figure 19, rotate the screw clockwise until a torque of 9 inch lbs. **WARNING!** Do not over tighten the screw. It is recommended that you grip the wrench by the short side.
- g) Verify that if the conversion is from NG to LPG, the screw must be re-assembled with the red o-ring visible (refer to Figure 21). If the conversion is from LPG to NG, the red o-ring of the screw must be not visible.
- h) Re-attach the black protection cap that was removed in step a (Figure 18).
8. Re-install the burner, ceramic panels, log set and glass door. Also refer to SECONDARY INSTALLATION - LOG SET INSTALLATION. When re-installing the burner, ensure that the burner to pilot hood relationship is similar to what is shown in Figure 22.
9. Reconnect the main gas line if it was disconnected and open the shut-off valve at the gas line to the unit.
10. Use a small brush to apply a warm soapy water solution to all gas connections (use a half dish soap and half warm water). If a gas leak is present, bubbling will occur. Gas leaks can be repaired by using an approved pipe thread sealant or approved Teflon tape. NEVER USE AN OPEN FLAME WHEN TESTING FOR LEAKS.
11. Reconnect the electrical power to the unit.
12. Relight the main burner in both the "HI" and "LO" positions to verify proper burner ignition and operation and proper flame appearance (refer to Figure 43 or Front Cover). Also refer to SECONDARY INSTALLATION - LOG SET INSTALLATION for a flame appearance picture.
13. MAKE SURE that the conversion label is installed on or close to the rating label to signify that the unit has been converted to a different fuel type.

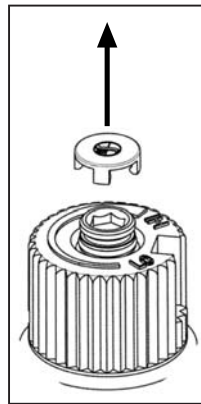


Figure 18: Removing valve cap.

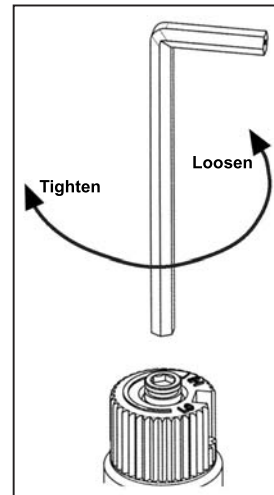


Figure 19: Removing valve screw.

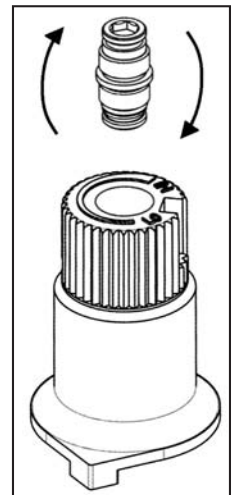


Figure 20: Flip valve screw.

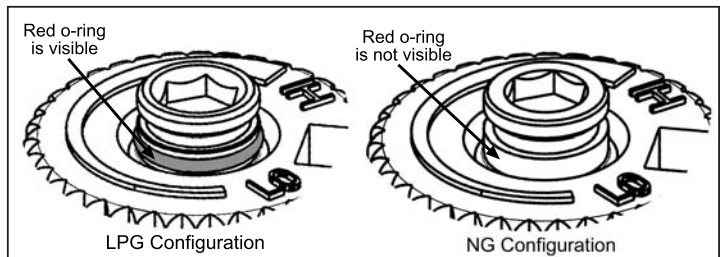


Figure 21: O-ring on valve screw.

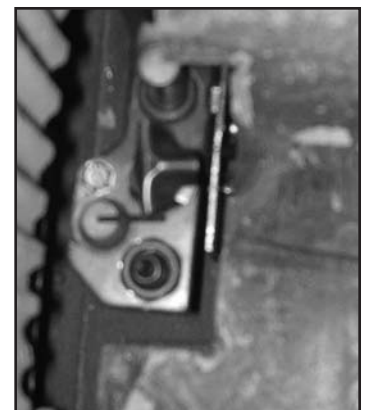


Figure 22: Pilot assembly beside the burner

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WARNING: Operation of this heater when not connected to a properly installed and maintained venting system can result in carbon monoxide (CO) poisoning and possible death.

PREPARATION FOR INSTALLATION:

- **If you are converting to a Cara DR unit, follow the instructions in this Manual, especially referencing the Conversion and Venting sections.**
- Remove the packaging from the appliance, and check to make sure there is no damage. If damage is found, please report it to both the carrier and your dealer as soon as possible.
- Before beginning, carefully check the glass door and the log set
- Locate a position where the flue system of the stove can be properly installed without damaging the integrity of the building; e.g. cutting a wall or ceiling joist.
- Check stove and flue system clearance requirements.
- Locate the stove where it can be accessed by a gas supply line.
- Locate the stove in a large and open room that is centrally located in the house. This will optimize heat circulation and comfort.
- As the stove can be equipped with a convection fan, ensure that an electrical outlet is within 6 ft (1.8 m) of the stove.
- The flow of combustion and ventilation air must not be obstructed.

CLEARANCES TO COMBUSTIBLES:

CLEARANCES MUST BE SUFFICIENT TO ALLOW ACCESS FOR MAINTENANCE AND SERVICE.

Table 3: Clearance to Walls in an Open Area, refer to Figure 23.

Letter	Description	Clearance
A	Sidewall to unit	11 inches (279 mm)
B	Backwall to unit	2.5 inches (64 mm)
C	Corner to unit	2.5 inches (64 mm)
D	Ceiling to floor	90 inches (2286 mm)
E	Floor (on hardwood and linoleum)	0 inches (0 mm)

Table 4: Clearance to Walls in an Alcove

Description	Clearance
Minimum Width	43½ inches (1105 mm)
Minimum Height	48 inches (1219 mm)
Maximum Depth	24 inches (610 mm)

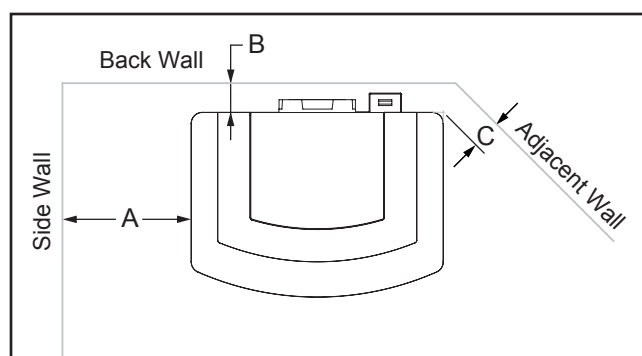


Figure 23: Clearance to Walls in an Open Area, refer to Table 3.

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PLANNING YOUR INSTALLATION:

The Cara DR is only for horizontal rear vent installations. The maximum horizontal is 2' (61 cm) and the slope on the vent must be 1¼" per foot (3.2 cm per 30 cm). No vent restrictor is required and no elbows are allowed. When planning your installation, it will be necessary to select the proper length of vent pipe for your particular requirements. It is important to note when passing through a wall, the maximum allowable wall thickness is 10 inches (25.4 cm); 1½ inches (3.8 cm) clearance to combustibles must be maintained. To connect the venting system to the appliance flue outlet, a twist-lock adapter is built into the appliance at the factory.

Note: If necessary to get above grade the Cara DR can be installed using a 14" or 36" snorkel.

APPROVED VENT PARTS:

Table 5: Approved Vent Manufacturers.

Manufacturer	Trade Name	Nominal Sizes
American Metal Products	AmeriVent Direct	4" - 6 5/8"
Security Chimneys International LTD	Secure Vent	4" - 6 5/8"
Selkirk Metalbestos	Direct-Temp	4" - 6 5/8"
Simpson Dura-Vent	Direct Vent GS	4" - 6 5/8"

Table 6: Vent part numbers (Must state if galvanized or black wanted, PART NUMBERS).

Direct Vent GS	Direct-Temp	Secure Vent	Ameri Vent Direct	Description
908	4DT-6	SV4L6		6" pipe length
			4D7	7" pipe length
907	4DT-9			9" pipe length
906	4DT-12	SV4L12	4D12	12" pipe length
904	4DT-24	SV4L24	4D2	24" pipe length
942	4DT-WT	SV4RSN	4DWT	Wall thimble
970	4DT-HKA	SV0SHK	4DHTK1	Horizontal termination kit (SD: Basic Kit, SEL: Kit A, SC: Standard Kit)
984	4DT-HC	SV4CHC	4DHC	Horizontal square termination

The Cara DR fireplace has been tested and certified for use with AMERICAN METAL PRODUCTS "AMERIVENT DIRECT", SIMPSON DURAVENT TYPE GS PIPE FOR GAS STOVES. SECURITY CHIMNEY'S "SECURE VENT DIRECT VENT SYSTEM" and SELKIRK "DIRECT-TEMP VENT SYSTEM" kits are available for horizontal venting. When using Simpson Duravent, it is recommended that, before installation, a bead of RTV High Temperature Silicone should be applied to each outer vent joint, and Mil-Pac to each inner joint. When planning an installation, it will be necessary to select the proper length of vent pipe for the particular requirements.

WARNING: Do not mix parts from different vent manufacturers' systems. **EXCEPTION TO WARNING:** This product has been evaluated by Intertek for using a Direct Vent GS starting collar in conjunction with Secure Vent, Direct-Temp, and Ameri Vent Direct venting systems. Use of these systems with the Direct Vent GS starting collar is deemed acceptable and does not affect the Intertek WH listing of the appliance.

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VENT TERMINATION RESTRICTIONS:

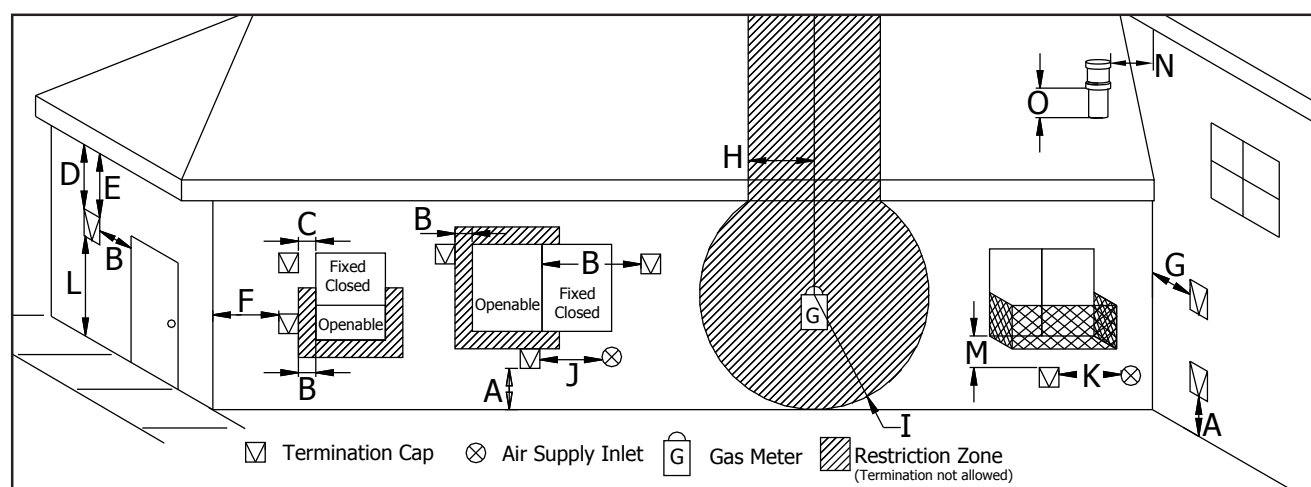


Figure 24: Vent Termination Restrictions, refer to Table 7.

Table 7: Vent termination clearances, refer to Figure 24.

Letter	Canadian Installation ¹	US Installation ²	Description
A	12 in (30 cm)		Clearance above grade, verandah, porch, deck, or balcony.
B	12 in (30 cm)	9 in (23 cm)	Clearance from window or door that may be opened.
C	12 in (30 cm)*		Clearance from permanently closed window (to prevent condensation).
D	22-3/4 in (57.8 cm)*		Vertical clearance to ventilated soffit located above the terminal, within a horizontal distance of 2 ft (60 cm) from center line of terminal.
E	22-3/4 in (57.8 cm)*		Clearance to unventilated soffit.
F	12 in (30 cm)*		Clearance to outside corner.
G	18 in (45.7 cm)*		Clearance to inside corner.
H	3 ft (91 cm) within a height of 15 ft (4.5 m) above the meter/regulator assembly	3 ft (91 cm) within a height of 15 ft (4.5 m) above the meter/regulator assembly*	Clearance to each side of center line extended above meter/regulator assembly.
I	3 ft (91 cm)	3 ft (91 cm)*	Radial clearance around service regulator vent outlet.
J	12 in (30 cm)	9 in (23 cm)	Clearance to non-mechanical air supply inlet to building, or the combustion air inlet to any other appliance.
K	6 ft (1.83 m)	3 ft (91 cm) above if within 10 ft (3 m) horizontally	Clearance to mechanical air supply inlet.
L	7 ft (2.13 m) ^t	7 ft (2.13 m) ^{*t}	Clearance above paved sidewalk or paved driveway located on public property.
M	12 in / 30 cm ⁺	12 in / 30 cm ⁺	Clearance under verandah, porch, deck, or balcony.
N	12 in (30 cm)*		Clearance horizontally to any surface (such as an exterior wall) for vertical terminations.
O	12 in (30 cm)		Clearance above roof line for vertical terminations.

¹ In accordance with the current CSA B149, Natural Gas and Propane Installation Code.

² In accordance with the current ANSI Z223.1 NFPA 54, National Fuel Gas Code.

* These numbers are only estimates. Clearance in accordance with installation codes and the requirements of the gas supplier.

^t A vent shall not terminate directly above a side walk or paved driveway that is located between two single family dwellings and it serves both dwellings.

⁺ Permitted only if verandah, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

NOTE: Venting terminals shall not be recessed into walls or siding.

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INSTALLATION OF APPLIANCE:

1. This unit has been shipped as a top-vented freestanding unit and must be converted to a rear vented unit before installed.
 - a. Carefully remove the trivet and the stovetop. Place on a soft surface as not to damage the finish.
 - b. Remove the four (4) ¼" screws that hold the flue collar elbow to the unit body.
 - c. Carefully remove the elbow being sure not to damage the gasket that is glued to the flue collar elbow, it seals the flue to the firebox (see Figure 25).
 - d. Turn the elbow 180° to the rear vent position and re-fasten with the screws removed in step b.

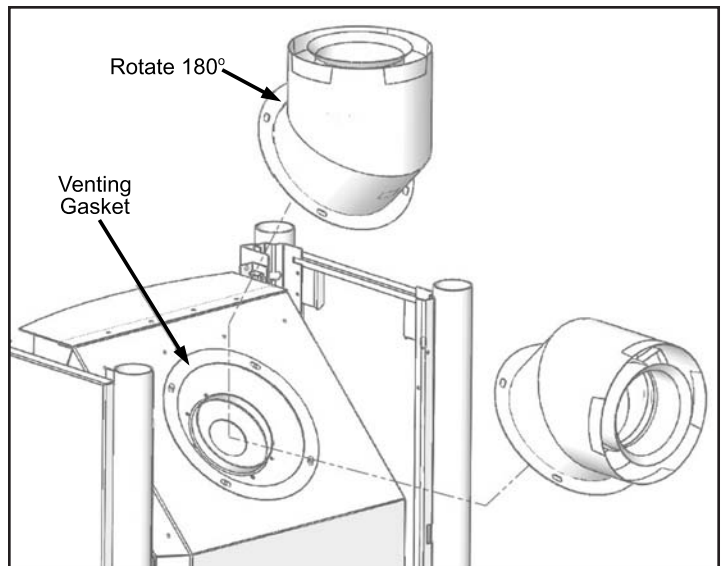


Figure 25: Converting Top Vented into Rear Vented.

2. This unit has been shipped with a Cara orifice installed and it must be replaced with a Cara DR orifice (NG - PO512-42 DMS or LP - PO512-54 DMS). Refer to MAINTENANCE AND SERVICE - FUEL CONVERSION.
3. Set the appliance in the desired location. Check to determine if wall studs are in the way when the venting system is attached. If this is the case, you may want to adjust the location of the appliance.
4. Direct vent pipe and fittings are designed with special twist-lock connections. Assemble the desired combination of black pipe and elbows to the appliance adapter with pipe seams oriented towards the wall or floor, as much out of view as possible.

Place a bead of Mil-Pac on the outer edge of the inner exhaust pipe (non-flared end). Place a bead of high temperature silicone on the male edge of the outer pipe. Push the pipe sections completely together, then twist-lock one section clockwise approximately ¼ turn, until the two (2) sections are fully locked. The female locking lugs will not be visible from the outside, on black pipe. They may be located by examining the inside of the female ends as shown in Figure 26.

Notes:

(a) Twist-lock procedure: four (4) indentations, located on the female end of the pipes and fittings, are designed to slide straight onto the male ends of adjacent pipes and fittings, by orienting the four (4) pipe indentations so they match and slide into the four (4) entry slots on the male end.

(b) Pipe minimum clearances to combustibles must be maintained; **2" (51mm) at top, 1½" (38mm) at sides, 1½" (38mm) at bottom.**

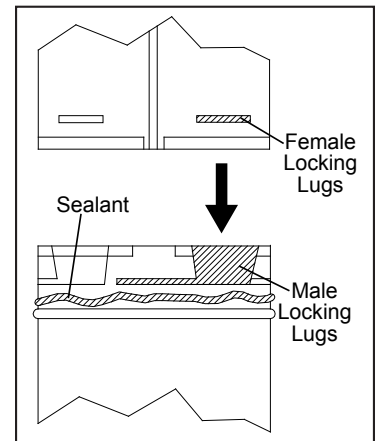


Figure 26: Twist-Lock Connection.

3. With the pipe attached to the stove in the correct location, mark the wall for a 10" (25.4cm) x 10" (25.4 cm) square hole (refer to Figure 27). The center of the square hole should match the center line of the horizontal pipe. Cut and frame the 10" (25.4cm) x 10" (25.4cm) hole in the exterior wall where the vent will be terminated. Refer to Figure 24 and Table 7. If the wall being penetrated is constructed of non-combustible material i.e. masonry or concrete, a 7" (17.8cm) hole is acceptable.
4. Position the horizontal vent termination in the center of the 10" (25.4cm) x 10" (25.4cm) hole, and attach to the exterior wall with the four (4) screws provided. Before attaching the vent termination to the exterior wall, run a bead of non-hardening mastic around the edges, so as to make a seal between

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the termination and the wall. The arrow on the vent termination should be pointing up, insure that the proper clearances to combustible materials are maintained.

5. Before connecting the horizontal run of the vent pipe to the vent termination, slide the black decorative wall thimble cover over the vent pipe.
6. Slide the appliance and vent assembly towards the wall, carefully inserting the vent pipe into the cap assembly. It is important that the vent pipe extend into the vent cap a sufficient distance with a minimum of 1 1/4" (3.2cm) overlap. Secure the connection between the vent cap pipe and the vent cap by attaching the two sheet metal straps extending from the vent cap assembly into the outer wall of the vent pipe. Use the two sheet metal screws provided to connect the straps to the vent pipe. Bend any remaining portion of the sheet metal straps back towards the vent cap, so the decorative wall thimble will conceal it (see left image in Figure 28).
7. Slide the decorative wall thimble up to the wall surface and attach with the screws provided. Apply decorative brass or chrome trim if desired (see right image in Figure 28).

NOTES:

(a) The four (4) wood screws provided should be replaced with the appropriate fasteners for stucco, brick, concrete, or other types of siding.

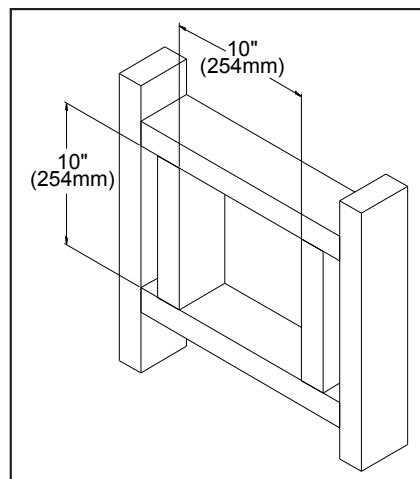


Figure 27: Wall Framing Hole for Horizontal Installation.

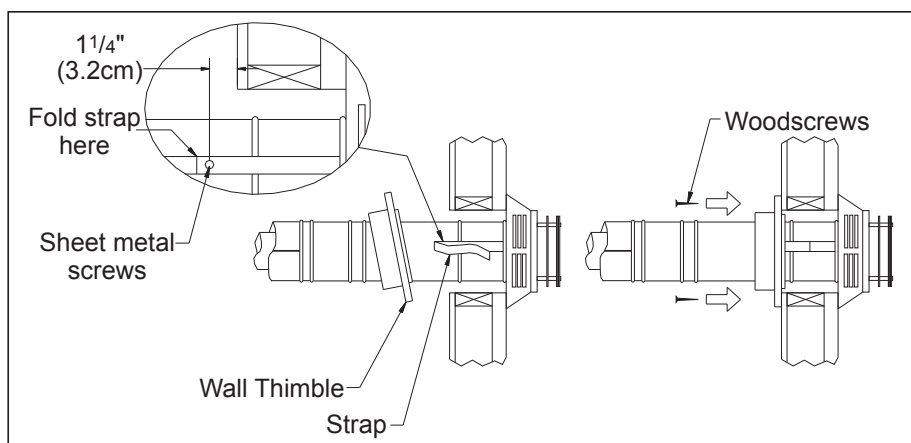


Figure 28: Installing Decorative Wall Thimble.

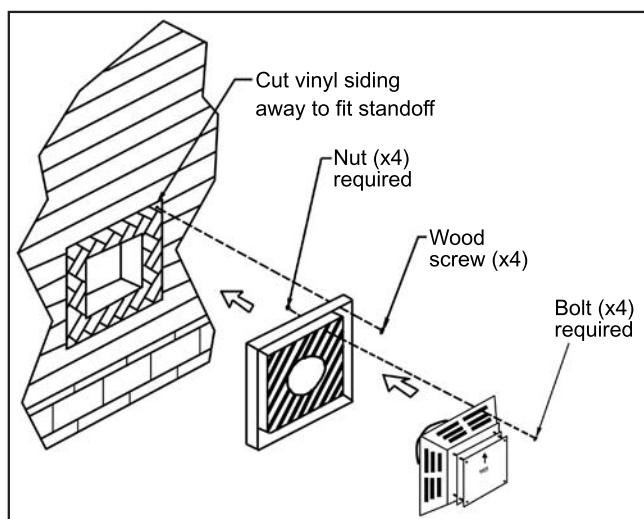


Figure 29: Installing Vent Cap with Vinyl Siding Stand-Off.

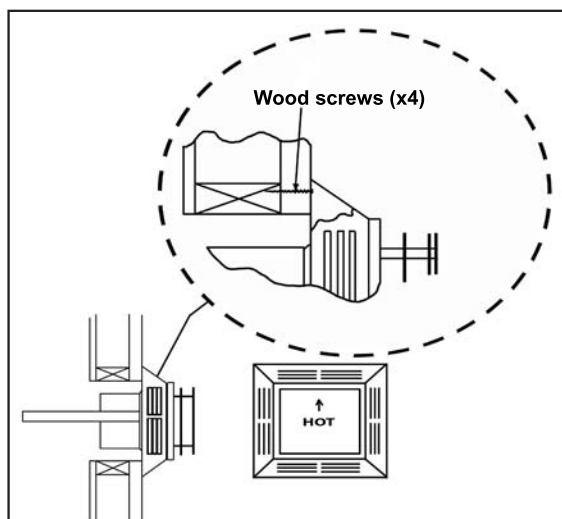


Figure 30: Installing Horizontal Vent Termination.

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(b) For buildings with vinyl siding, a vinyl siding standoff, should be installed between the vent cap and the exterior wall (see Figure 29). Attach the vinyl siding standoff to the horizontal termination. The vinyl siding standoff prevents excessive heat from possibly melting the vinyl siding material. Note that the horizontal vent termination bolts onto the flat portion of the vinyl siding standoff (shaded area in Figure 29), so that an air space will exist between the wall and the vent termination.

(c) The horizontal run of vent pipe must be level and **should have a 1¼ inch (32mm) rise for every one foot (305mm) of run towards the termination.** Never allow the vent to run downward. This could cause high temperature and may present the possibility of a fire.

(d) The location of the horizontal vent termination on the exterior wall must not be easily blocked or obstructed.

(e) When installing a vent pipe in a chase the minimum clearance to combustibles is 2" (51 mm).

(f) Maintain manufacturer's clearances to combustibles with venting.

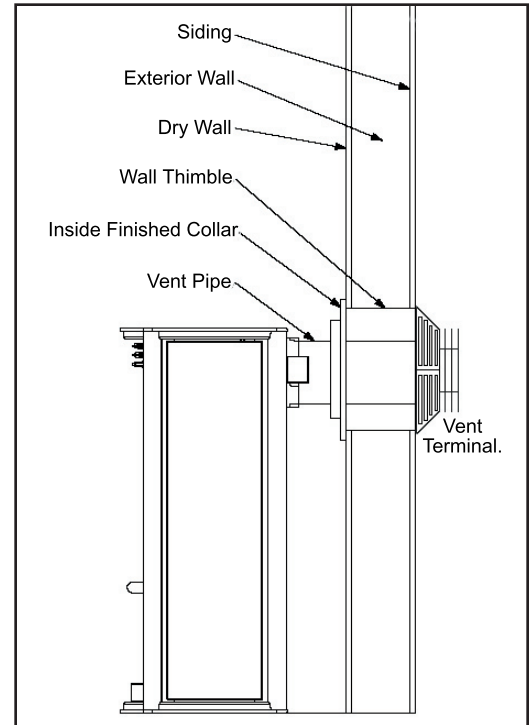


Figure 31: Installation for Cara DR.

INSTALLATION WITH OPTIONAL SNORKEL:

If necessary to get above grade the Cara DR can be installed using a 14" or 36" snorkel.

Place the unit into position.

Attach a small section of pipe on the unit and mark exterior wall where vent would pass through the wall.

Cut a 10" (25.4 cm) minimum hole in the wall to maintain clearances to combustibles. Frame hole as shown in Figure 27.

Install a wall thimble, interior finished collar, and the vent section through the wall.

Seal around the vent terminal to the structure using a non-hardening mastic.

Also refer to INITIAL INSTALLATION - INSTALLATION OF APPLIANCE.

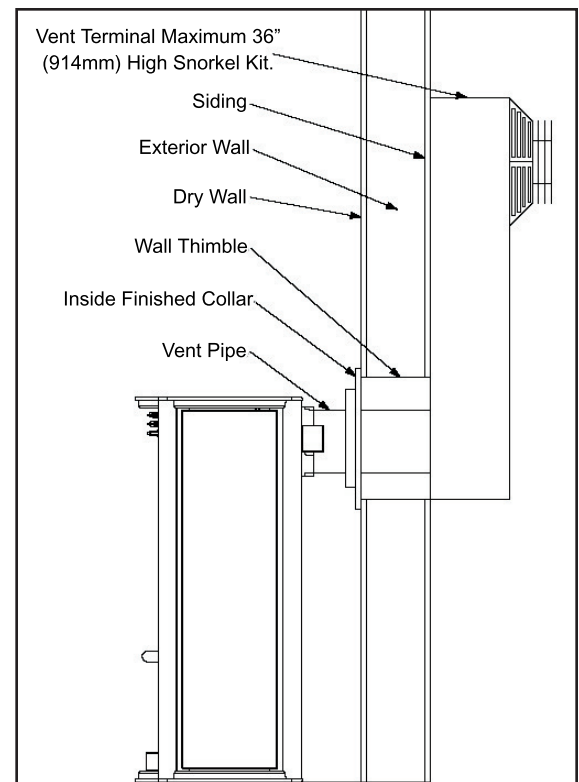


Figure 32: Installation for Cara DR with a snorkel.

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GAS LINE CONNECTION AND TESTING:

WARNING: Only persons licensed to work with gas piping may make the necessary gas connections to this appliance.

GAS LINE CONNECTION

- This stove is equipped with a certified flexible pipe located on the right side of the unit terminating in a $\frac{3}{8}$ " male NPT fitting. Consult your local authorities codes or the CAN/CGA B 149 (1 or 2) installation code in Canada, or in the USA gas installations follow either local codes or the current edition of the National Fuel Gas Code ANSI Z223.1.

- The efficiency rating of this appliance is a product of the thermal efficiency rating determined under continuous operating conditions and was determined independently of any installed system.

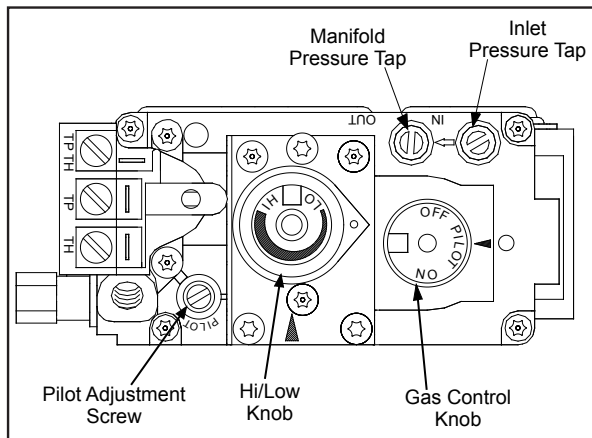


Figure 33: Fully Labeled Gas Valve.

The appliance and its shutoff valves must be disconnected from the gas supply piping system during any pressure testing where the pressure exceeds $\frac{1}{2}$ PSIG (3.45 KPa) or damage will occur to the valve.

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than $\frac{1}{2}$ psig (3.45 KPa).

Always check for gas leaks with a soap and water solution after completing the required pressure test.

TO TEST VALVE PRESSURES

The pressure taps are located on the left side of the valve

- Turn set screw 1 turn counter clockwise to loosen,
- Place $\frac{5}{16}$ " (8 mm) I.D. hose over pressure tap system.
- Check pressures using a manometer.
- When finished, release pressure, remove hose & tighten set screw.

Table 8: Pressure and BTU Information.

	Natural Gas	Propane
Main Burner	PO512-42 DMS	PO512-54
Manifold Pressure	3.8" W.C. / 0.95KPa	11.0" W.C. / 2.7KPa
Min. Manifold Pressure	1.1" W.C. / 0.27KPa	2.9" W.C. / 0.72KPa
Max Supply Pressure	7.0" W.C. / 1.74KPa	13.0" W.C. / 3.28KPa
Min. Supply Pressure	5" W.C. / 1.24KPa	12.0" W.C. / 2.98KPa
Max BTU/hr Input	26,000 BTU/hr (7.62 KW)	26,000 BTU/hr (7.62 KW)
Min. BTU/hr Input	15,000 BTU/hr (4.4 KW)	14,000 BTU/hr (4.1 KW)
Venturi Setting	$\frac{1}{4}$ " (6mm) minimum	Completely Open

NEVER USE AN OPEN FLAME FOR LEAK TESTING.

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ELECTRICAL REQUIREMENTS FOR GAS VALVE AND OPTIONAL BLOWER:

The **ENVIRO** CARA will operate without electrical power. This model has a millivolt gas control, which uses the pilot flame to generate enough electricity to operate the main burners. The appliance when equipped with an optional blower must be electrically connected and grounded in accordance with local codes or in the absence of local codes, with the current CSA C22.1 CANADIAN ELECTRICAL CODE Part 1, SAFETY STANDARDS FOR ELECTRICAL INSTALLATIONS, OR THE NATIONAL ELECTRICAL CODE ANSI / NFPA 70 in the U.S.

Table 9: Recommended Thermostat Wire Size.

Wire Size	Max. Length
14 gauge	100 ft (30.48 m)
16 gauge	60 ft (18.29 m)
18 gauge	40 ft (12.00 m)
20 gauge	25 ft (7.62 m)
22 gauge	18 ft (5.49 m)

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

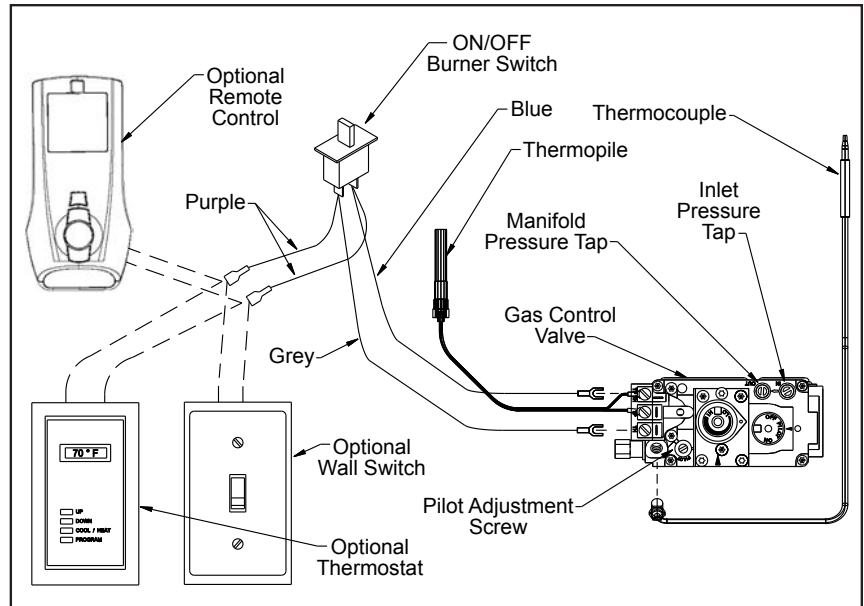


Figure 34: Gas Control Valve and Optional Thermostat Wiring.

WARNING: Electrical grounding instructions. This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard, and must be plugged directly into a properly grounded three-prong outlet.

DO NOT cut or remove the grounding prong from this plug.

ELECTRICAL INFORMATION:

Canadian Installations

The venting system must be installed in accordance with the current CSA B149 installation code and/or local codes having jurisdiction.

U.S.A. Installations

The venting system must be installed in accordance with the current National Fuel Gas Code, ANSI Z223.1, and/or local codes having jurisdiction.

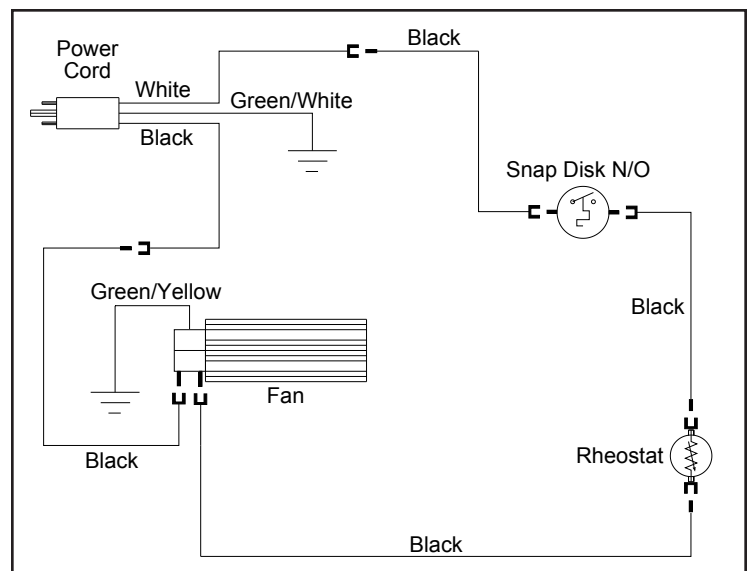


Figure 35: Wiring Diagram for Electric Fan.

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INSTALLATION OF OPTIONAL BLOWER:

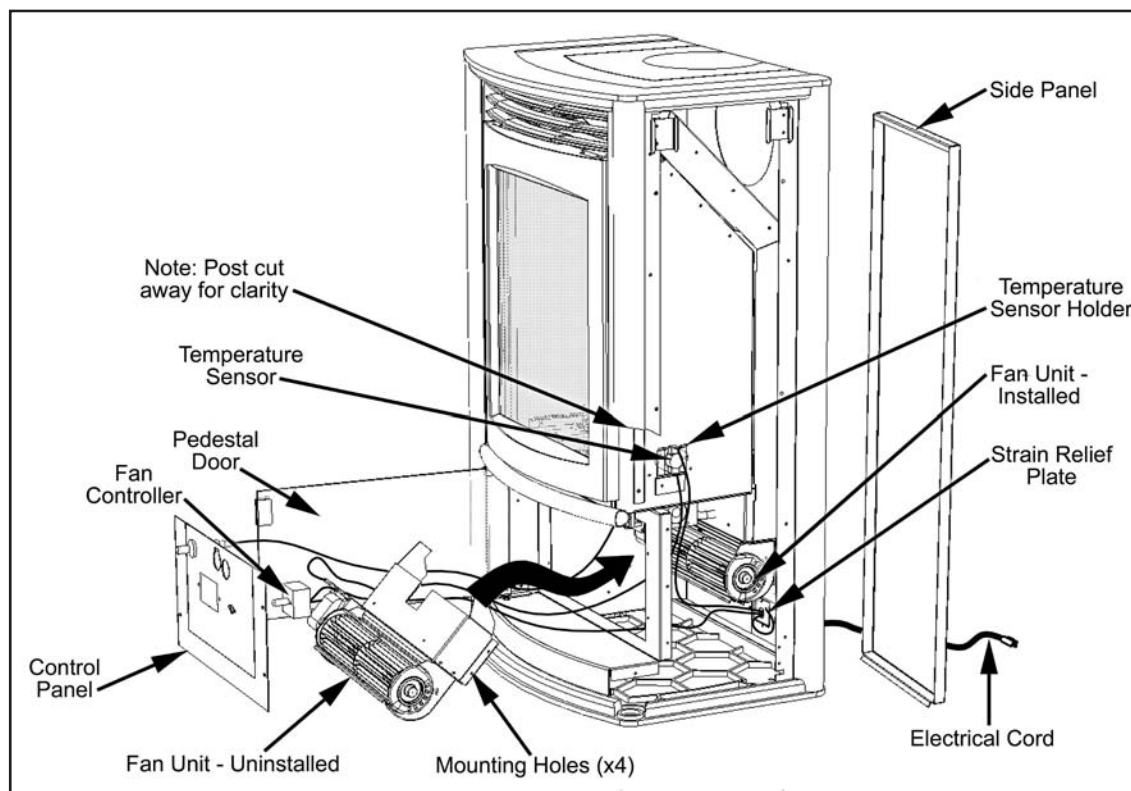


Figure 36: Optional Blower (Fan) Installation.

1. Remove the pre-assembled blower from the packaging. Inspect the blower for damage. If damage is noticed call your dealer, distributor or courier company and have components replaced.
2. Remove the side panel by pulling the panel up, slide the panel out of the bottom slots, and set aside.
3. Install the temperature sensor into the holder.
IMPORTANT: The temperature sensor must be in contact with the firebox.
4. Open the pedestal door and remove the four (4) T-20 screws holding the Control Panel in place.
5. Fit the Fan Unit into the cabinet being careful to work around the gas and pilot lines. The fan will fit up behind the gas valve. With an extension driver, fasten the Fan Unit in place with four (4) T-20 screws provided.
6. Install the Fan Controller into the provision in the Control Panel.
7. Install the Strain Relief plate into the stove back by fitting the tab on the plate into the stove back and secure the plate with a T-20 screw provided.
8. Plug in all the electrical connections as indicated in Figure 35. This includes the Fan Controller, Temperature sensor and Fan Unit.
9. Using the provided T-20 screw, located on the right mount below and behind the Temperature Sensor, fasten the wire tie supplied. With the wire tie capture the fan wires including the temperature switch wires, this will secure the wires and route them away from hot surfaces and out of the way of the fan blades
10. Re-install the Control Panel and Side Panel.
11. Plug the fan assembly into the wall outlet and turn the unit on to ensure fan operation.

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COMMONWEALTH OF MASSACHUSETTS INSTALLATION ADENDUM:

These are the Special Requirements for Side-Wall Vented Appliances in Commonwealth of Massachusetts

IMPORTANT: The Commonwealth of Massachusetts requires compliance with regulation 248 CMR 4.00 and 5.00 for installation of side-wall vented gas appliances as follows:

(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. **INSTALLATION OF CARBON MONOXIDE DETECTORS.** At the time of installment of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.
 - a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.
 - b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.
2. **APPROVED CARBON MONOXIDE DETECTORS.** Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.
3. **SIGNAGE.** A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, **"GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS."**
4. **INSPECTION.** The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

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(b) EXEMPTIONS: The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and
2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) MANUFACTURER REQUIREMENTS – GAS EQUIPMENT VENTING SYSTEM PROVIDED. When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

1. Detailed instructions for the installation of the venting system design or the venting system components; and
2. A complete parts list for the venting system design or venting system.

(d) MANUFACTURER REQUIREMENTS – GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED. When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:

1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
2. The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

(e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting instructions shall remain with the appliance or equipment at the completion of installation.

SECONDARY INSTALLATION

INSTALLATION OF LOG SET:

The placement of the logs is not arbitrary. If they are positioned incorrectly, the flames can be “pinched” and will not burn correctly. The burner has four (4) pins and four (4) ledges which make alignment easier. Using the pictures provided, carefully set the logs in place.

NOTE: The logs are fragile and should be handled gently.

1. Carefully remove logs from box and check there is no damage. It is very important to install all logs in their proper position to ensure safe, optimum operating conditions.
2. Place the Left Rear Log Chunk on the two (2) left rear pins and the Right Rear Log Chunk on the two (2) right rear pins (refer to Figures 37 and 38).
3. Place the bottom of the “Y” Log in the ledge at the front left of the burner and the top of the log rests on the Right Rear Log Chunk as shown in Figure 38 and 39.
4. Place the bottom of the Right Log in the ledge at the front right of the burner and rest the top of the log against the rear panel as shown in Figure 39 and 40.

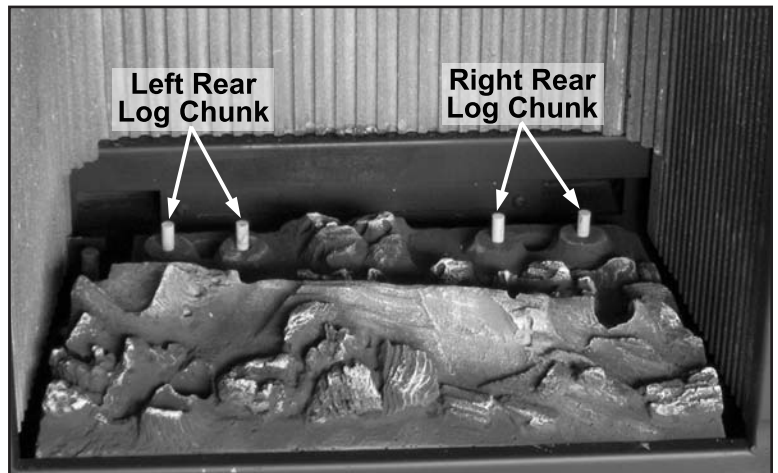


Figure 37: Log Placement of Rear Log Chunks.

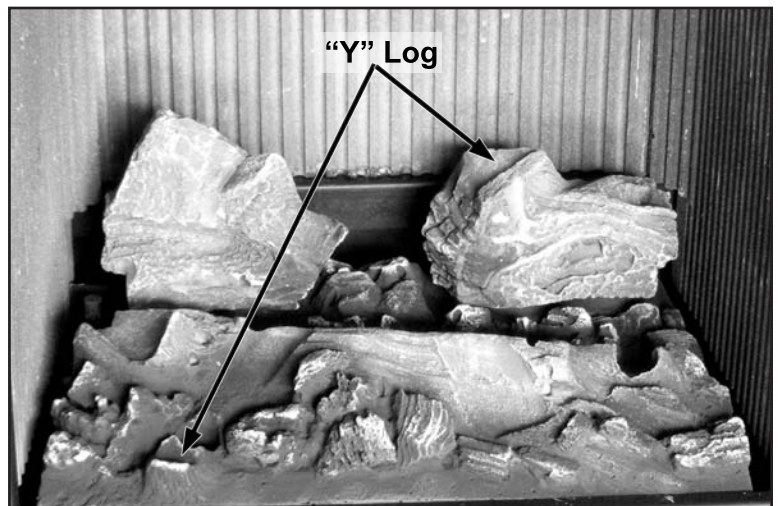


Figure 38: Log Placement of “Y” Log.

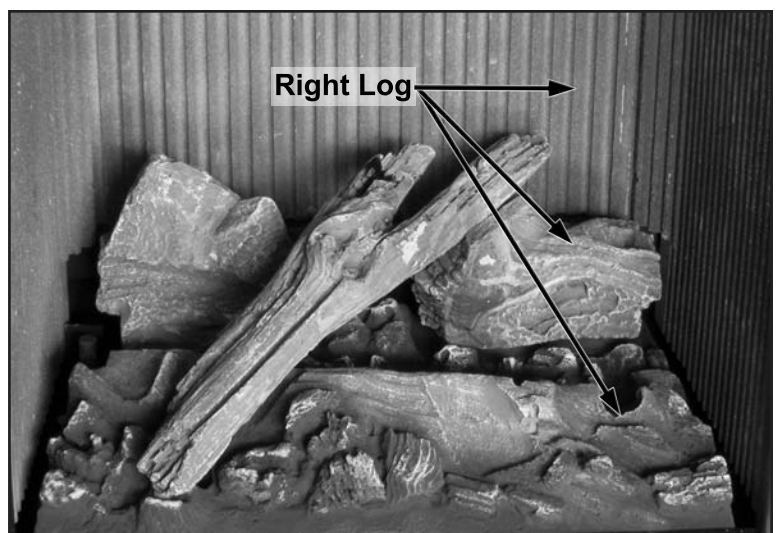


Figure 39: Log Placement of Right Log.

SECONDARY INSTALLATION

5. Place the bottom of the Left Log in the ledge at the front left of the burner and rest the middle of the log against the Left Rear Log Chunk as shown in Figure 40 and 41.

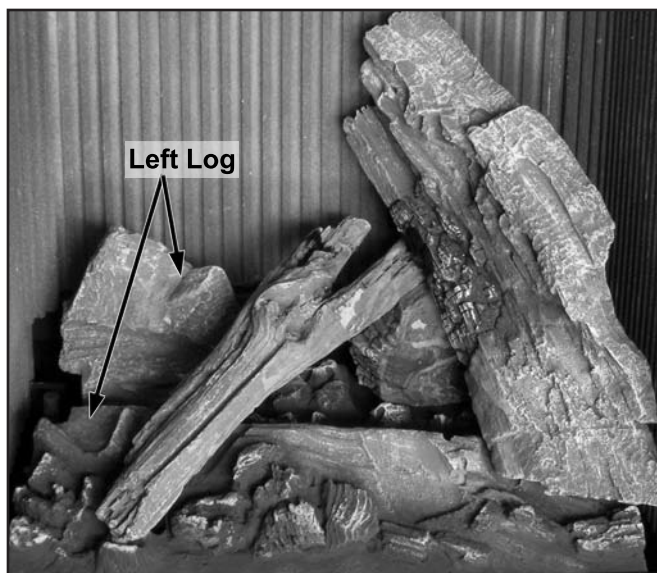


Figure 40: Log Placement of Left Log.

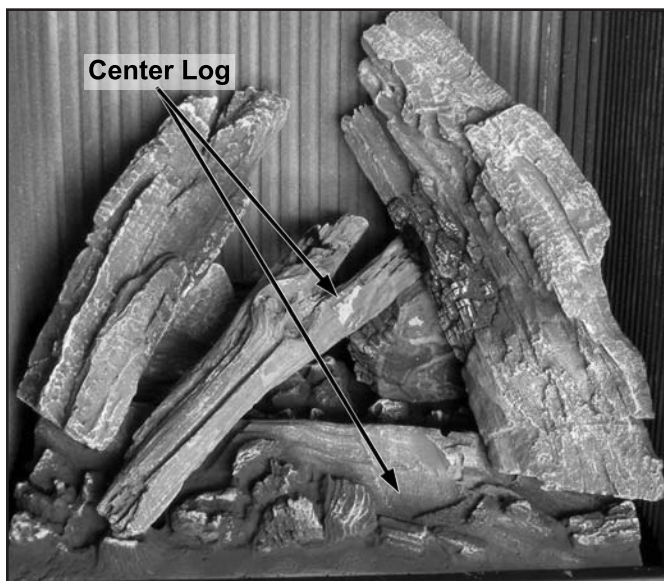


Figure 41: Log Placement of Center Log.

6. Place the bottom of the Center Log in the ledge at the front center of the burner and rest the middle of the log against the top of the "Y" Log as shown in Figure 41 and 42.



Figure 42: Log Placement Complete.

7. Check that the log set is laid out as shown in Figure 42 and install door.
8. Light the unit to ensure it has a good flame (see Figure 43)

SECONDARY INSTALLATION

CAUTION: NEVER OPERATE THIS APPLIANCE WITH THE GLASS DOOR REMOVED.



Figure 43: Cara DR with a Good Flame.

Important note: When the unit is turned on for the first time, it should be turned onto high without the fan on for the first four (4) hours. This will cure the paint, logs, gasket material and the other products used in the manufacturing process. It is advisable to open a window or door, as the unit will start to smoke and can irritate some people. After the unit has gone through the first burn turn the unit off including the pilot, let the unit get cold then remove the glass door and clean it with a good gas fireplace glass cleaner, available at your local ENVIRO dealer.

See MAINTENANCE AND SERVICE on how to remove door to clean glass.

INSTALLATION OF ROCK SET:

If the rocks are positioned incorrectly, the flames can be “pinched” and will not burn correctly. If the rocks are broken due to handling or shipping, replace the rocks with new ones. Using the pictures provided, carefully set the rocks in place.

NOTE: The rocks are fragile, particularly after usage. Please handle with due care during servicing.

1. Carefully remove rocks from box and check there is no damage. It is very important to install all rocks in their proper position to ensure safe, optimum operating conditions.
2. Place the rock cluster onto the burner. There are two (2) holes at the back corners of the burner and two (2) aligning pins on the bottom of the rock cluster (refer to Figures 44 & 45).

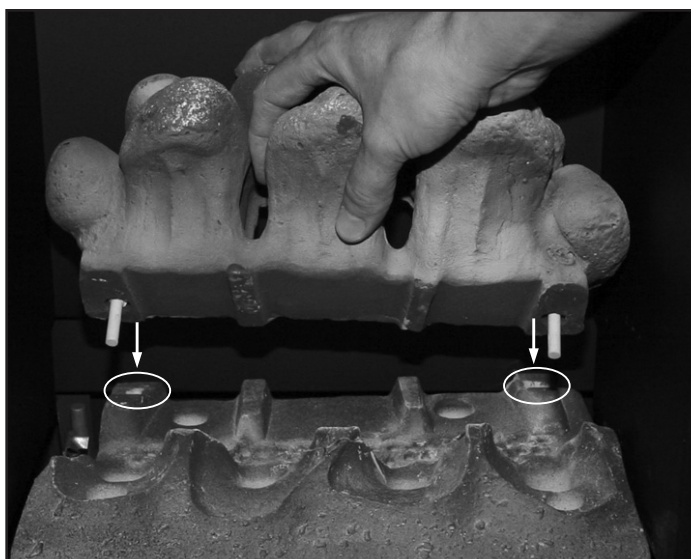


Figure 44: Installation of Rock Cluster.

SECONDARY INSTALLATION

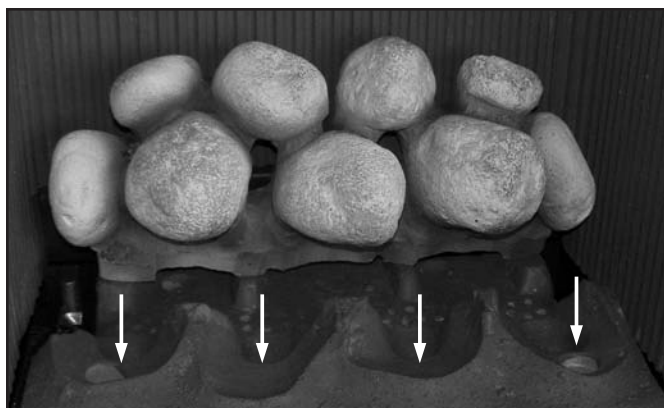


Figure 45: Rock Placement of Four Large Rocks.



Figure 46: Rock Placement of Two Medium Rocks.

3. The four (4) large rocks are placed across front of burner (see Figures 45 & 46). These rocks are all the same shape, but must be rotated in different positions to fit in the cut-aways in the burner base. When installed correctly, there should be no visible gaps between the rocks and the burner base. The gaps between the rock cluster and the four (4) large rocks needs to be maintained as smaller gaps will lead to carbon deposits and build up.
4. Place the two (2) medium rocks; one on either side of the cluster as shown in Figures 46 & 47. These rocks can not be placed down between the others.
5. Addition the seven (7) small rocks. These can be added in some fashion like what's shown in Figures 47 & 48 with three (3) on the top row with the larger one in the center and two (2) smaller ones on either side.
7. Check that the rock set is laid out as shown in Figure 48 and install door.
8. Light the unit to ensure it has a good flame (see Front Cover).

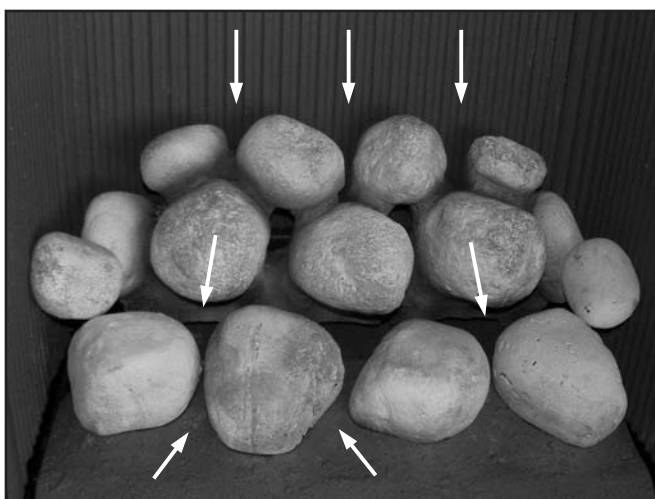


Figure 47: Rock Placement of Seven Small Rocks.

CAUTION: NEVER OPERATE THIS APPLIANCE WITH THE GLASS DOOR REMOVED.



Figure 48: Rock Placement Complete.

NOTES:

- a. Some sooting on the rocks is normal. The sooting should just be a thin covering in some places on the center three (3) rocks of the rock cluster. There should not be continuous build up.
- b. Surface cracks may appear after prolonged use. This is due to the expansion and contraction of materials during heating cycles. Surface cracks are not a problem as long as the assemblies are maintaining there positions, and operation does not appear to be altered.

SECONDARY INSTALLATION

Important note: When the unit is turned on for the first time, it should be turned onto high without the fan on for the first four (4) hours. This will cure the paint, rockss, gasket material and the other products used in the manufacturing process. It is advisable to open a window or door, as the unit will start to smoke and can irritate some people. After the unit has gone through the first burn turn the unit off including the pilot, let the unit get cold then remove the glass door and clean it with a good gas fireplace glass cleaner, available at your local ENVIRO dealer. See MAINTENANCE AND SERVICE on how to remove door to clean glass.

INSTALLATION OF CERAMIC FIREBOX LINER (OPTIONAL):

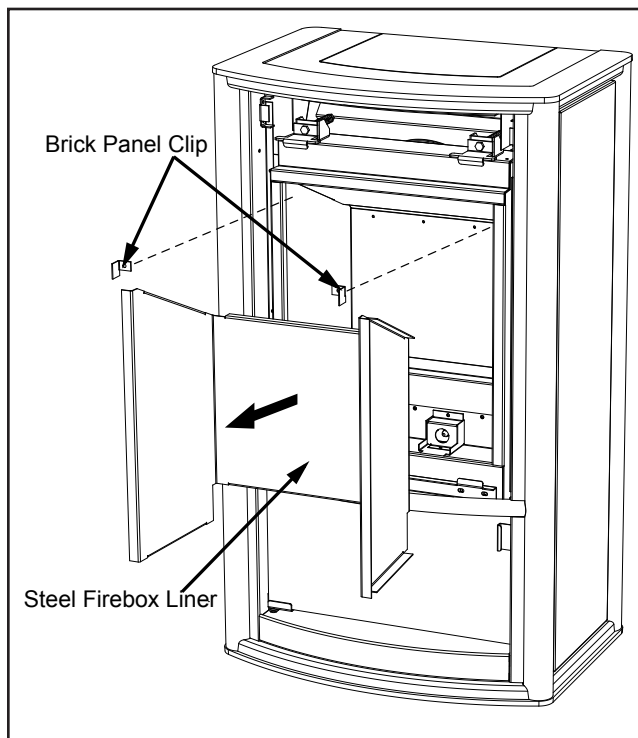


Figure 49: Steel Firebox Liners Installation.

4. Using a T-20 screwdriver, remove the left and right Brick Panel Clips
5. Remove the Steel Firebox Liner by pulling the left side of the panel in towards the center of the unit then out a little. Repeat for the right side then pull the panel completely out.
6. Install the rear ceramic liner by placing it against the back of the firebox. The top of the liner has an angled edge, the bottom does not. Note: The Firebox Baffle must be in place for the Firebox Liners to be installed.
7. While holding the rear ceramic liner from falling forward, install the left and right liners by sliding them in against the sides of the firebox and up to the rear liner (refer to Figure 50).
8. Attach and tighten the brick panel clips with the screws provided. The side liners hold the rear liner in place.
9. Re-install the burner (see MAINTENANCE AND SERVICE - BURNER REMOVAL & INSTALLATION), log set (see SECONDARY INSTALLATION - LOG SET INSTALLATION), and the door.

Do not install when the unit is hot.

The firebox liner is fragile. Handle liners with care and avoid knocking them on any object.

The Enviro Cara DR comes with a Steel Firebox Liner installed, which must be removed if a Ceramic Firebox Liner is to be installed.

1. Remove the glass door as shown in the MAINTENANCE AND SERVICE - GLASS DOOR REMOVAL.
2. Carefully remove the log set.
3. Slide the burner tray back just far enough so the front edge of the burner does not catch on the front lip of the firebox. Lift the front of the burner up and out of the firebox.

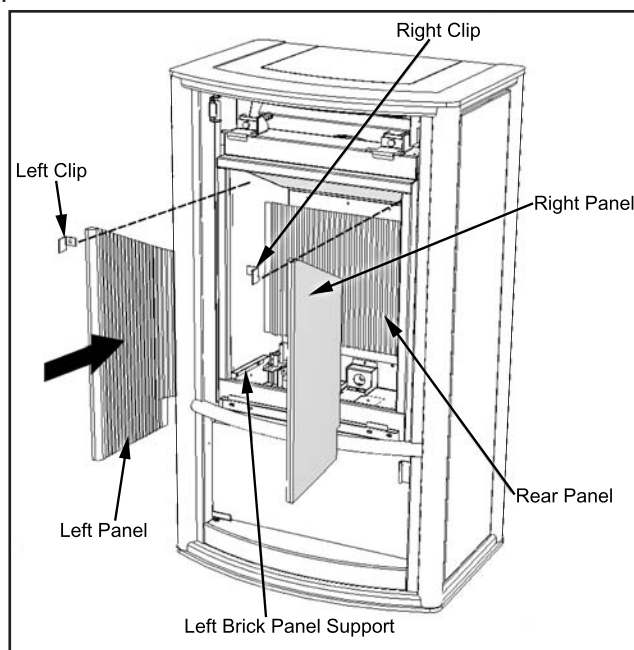


Figure 50: Firebox Liners Installation.

TROUBLE SHOOTING

Problem	Possible Cause	Solution
The main burner does not ignite when called for.	The gas valve may not be on.	<ul style="list-style-type: none"> • Check that the gas control knob is in the "ON" position.
	Thermostat is not calling for heat.	<ul style="list-style-type: none"> • Adjust the thermostat several degrees above ambient temperature.
	Problem with gas valve.	<ul style="list-style-type: none"> • Use a DC voltmeter to measure the voltage across the TPTH and TP terminals. Main operator voltage: Open circuit $\geq 325\text{mV}$ Closed circuit $\geq 100\text{mV}$ • If voltage is not present, check the control circuit for proper operation. • If proper control system voltage is present, replace the gas control.
Spark will not light the pilot after repeatedly pressing the spark ignitor.	Defective piezo ignitor.	<ul style="list-style-type: none"> • Check connections to ignitor. • If ignitor connections are good but no spark, replace ignitor.
	Broken spark electrode.	<ul style="list-style-type: none"> • Check for broken ceramic insulation, replace electrode if broken.
	Misaligned spark electrode.	<ul style="list-style-type: none"> • If spark is not arcing from electrode to pilot, loosen the screws on the pilot base adjust and tighten.
Pilot will not remain lit.	Problem with thermocouple circuit.	<ul style="list-style-type: none"> • Check for proper connection of the thermocouple to the rear of the valve. If loose, fully tighten. • Check pilot for full flame impingement around thermocouple. If flame is too small, check gas pressure, adjust pilot rate screw, check pilot head for damage. • Check thermocouple voltage at valve. It must be greater than 5 mV. If low, replace thermocouple.
	Air in gas line (pilot dies while knob is depressed).	<ul style="list-style-type: none"> • Bleed line. • Check gas line pressure. • Contact dealer.
Burners will not remain lit.	Problem with thermopile circuit.	<ul style="list-style-type: none"> • Check gas line pressure . • Check for flame impingement on thermopile. If low, see "Pilot will not remain lit". • Check thermopile for minimum of 300 mV when burner is switched on. • Check wiring to thermostat for breaks.
Flame lifting	Leak in vent pipe	<ul style="list-style-type: none"> • Check for leaks in vent connections.
	Improper vent configuration	<ul style="list-style-type: none"> • Check vent configuration with manual.
	Terminal may be recirculating flue gases	<ul style="list-style-type: none"> • Check to see if terminal is on correctly. • May need to install high wind termination cap. • Contact dealer.
Glass fogs up	Normal Condition: after the appliance warms up the glass will clear. **Due to additives in gas, glass may get hazy during operation** Clean as needed.	
Blue Flames	Normal during start up: flames will yellow as the fireplace heats up.	
Flames are burning "dirty" or sooting	Flame impingement	<ul style="list-style-type: none"> • Check log positioning. • Increase primary air by opening the venturi shutter and/or by opening the vent restrictor. See also "Burners will not remain lit."
Remote control doesn't work	Problem with the remote	<ul style="list-style-type: none"> • One or more of the batteries are dead. See remote control instructions.
	Problem with fireplace	<ul style="list-style-type: none"> • The on/off switch is turned to OFF. • The gas control valve is turned to PILOT or OFF. • The pilot has gone out.

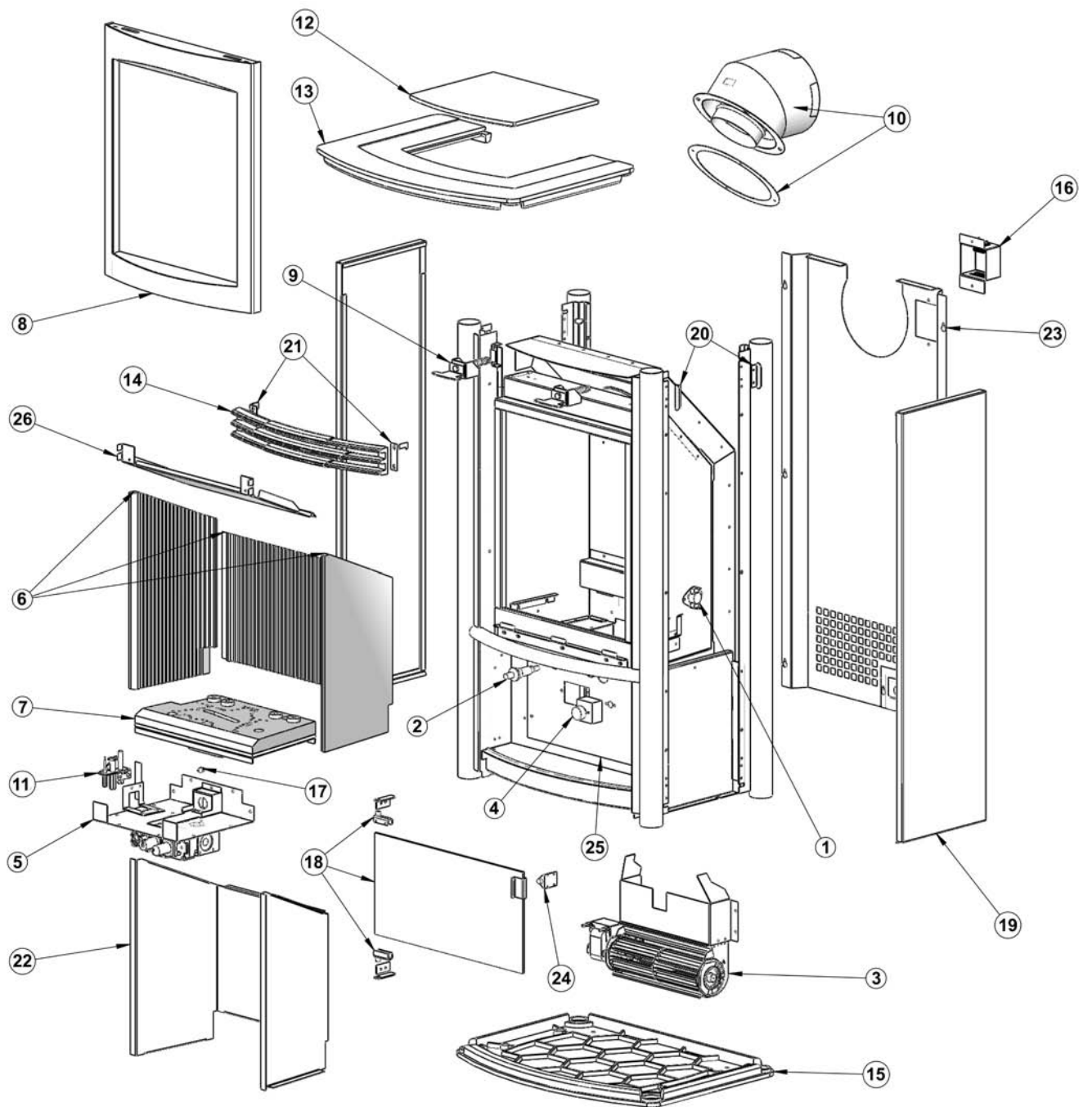
PARTS LIST

Reference Number	Part Description	Part Number
1	120°F (49°C) Ceramic Fan Temperature Sensor	EC-001
	Thermopile	EC-012
2	S.I.T. Piezo Igniter	EC-023
	Domestic Power Cord - 115V	EC-042
	Heyco Strain Relief	EC-044
3	Convection Blower (Fan) - 115V	EC-069
3	Cara Fan Kit	50-1545
4	Fan Controller with Knob - 115V	EF-045
	Dual Bulb Door Gasket - 10 ft (3.05m)	50-634
5	S.I.T. Nova Valve Convertible	50-1421
5	S.I.T. Valve Conversion Screw with O-ring	50-1450
5	S.I.T. Valve Conversion Screw Cap	50-1451
5	Cara Valve Tray Assembly	50-1604
6	Cara Firebox Liner - Ceramic	50-1546
7	Cara Log Set & Burner	50-1563
	Cara Rock Set & Burner	50-1564
	Proflame Programmable Thermostat Remote Control System - NG	50-1570
	Proflame Programmable Thermostat Remote Control System - LP	50-1571
	Cara Log Set Only	50-1600
	Cara Rock Set Only	50-1601
7	Cara Log Set Burner Only	50-1602
	Cara Rock Set Burner Only	50-1603
	Cara Conversion Kit LP to NG Convertible	50-1591
	Cara Conversion Kit NG to LP Convertible	50-1592
8	Cara Door Assembly	50-1593

PARTS LIST

Reference Number	Part Description	Part Number
8	Cara Glass with Gasket - 14½" x 16¾" (368mm x 425mm)	50-1613
9	Cara Door Latch Assembly	50-1594
10	Cara Flue Outlet Elbow & Gasket	50-1598
10	Cara Flue Outlet Gasket Only	50-1599
11	Cara PSE Pilot Assembly (PSE-C3-505)	50-1605
11	Cara PSE Thermocouple (#019G)	50-1612
12	Cara Cast Insert Rear Vent	50-1606
13	Cara Cast Stove Top	50-1608
14	Cara Cast Louvers	50-1609
15	Cara Cast Stove Bottom	50-1610
	Cara Leveling Legs (Set of 4)	50-1611
16	Cara Burner Switch	50-1617
16	Cara Switch Box	50-1708
17	Cara Main Orifice LPG (PO512-54)	50-1620
17	Cara Main Orifice NG (PO512-42)	50-1629
18	Pedestal Glass Door Assembly with Magnet Brackets	50-1621
19	Cabinet Side Left and Right	50-1622
20	Cabinet Side Hangers (Set of 4)	50-1623
21	Louver Brackets Left and Right	50-1624
22	Cara Firebox Liner - Steel	50-1627
	Cara DR Owner's Manual	50-1628
23	Cara Stove Back	50-1707
24	Cara Pedestal Door Magnet	50-1709
25	Cara Control Panel	50-1710
26	Cara Firebox Baffle	50-1740

PARTS DIAGRAM



WARRANTY

Sherwood Industries Ltd. is the manufacturer of the VistaFlame line of heating products. At Sherwood Industries, our commitment to the highest level of quality and customer service is the most important thing we do. Each VistaFlame stove is built on a tradition of using only the finest materials and is backed by our Exclusive Lifetime Limited Warranty to the original purchaser. With Enviro, you're not just buying a fireplace or stove, you're buying a company with years of unequalled performance and quality.

Limited Lifetime Warranty:

Under this warranty, Sherwood Industries Ltd. covers the fireplace or stove body and accessories against defects in materials and workmanship, for part repair or replacement for the first seven (7) years and limited labour for the first two (2) years to the original purchaser. This Warranty covers: Firebox, Heat Exchanger, Steel Firebox Panels, Ceramic Logs & Panels, Burner, Ceramic Glass, Pedestals, Panels and Legs. Please see the exclusions and limitation section below as certain restrictions and exclusions apply to this warranty.

Limited Two (2) Year Warranty:

Under this warranty, Sherwood Industries Ltd. covers: Gas Assembly, Blower, Blower control, Temperature Sensors and Wire Harness against defects in materials and workmanship, for part repair or replacement for the first two (2) years and limited labour for the first two (2) years to the original purchaser. Please see the exclusions and limitation section below as certain restrictions and exclusions apply to this warranty.

Limited One (1) Year Warranty:

Under this warranty, Sherwood Industries Ltd. covers all exterior surface finishes against defects in materials and workmanship, for part repair or replacement and limited labour for the first (1) year to the original purchaser. Please see the exclusions and limitations section below as certain restrictions and exclusions apply to this warranty.

Here is how our Warranty works

If you have any concerns with your VistaFlame product, please contact the dealer where you purchased the fireplace or stove. Your dealer shall make all claims under this warranty in writing.

To the Dealer

When filling out a warranty claim, please complete the following information on an official warranty claim form:

Customer information: Name, address and telephone number of purchaser and date of purchase.

Dealer information: Date of installation, name of installer and dealer, serial number of the appliance, nature of complaint, defects or malfunction, description and part numbers of any parts replaced.

To the Distributor

Sign and verify that work and information are correct.

Exclusions and Limitations:

1. This Warranty does not cover tarnish, discoloration or wear on the plating or paint.
2. This Warranty excludes wear and tear or breakage caused by cleaning, moving or service on log set and panels.
3. A qualified installer must install this stove or fireplace. This Limited Warranty covers defects in materials and workmanship only if the product has been installed in accordance with local building and fire codes; in their absence, refer to the owner's manual. If the product is damaged or broken as a result of any alteration, willful abuse, mishandling, accident, neglect, or misuse of the product, the Limited Warranty does not apply.

WARRANTY

4. The stove must be operated and maintained at all times in accordance with the instructions in the Owner's Manual. If the unit shows signs of neglect or misuse, it is not covered under the terms of this Warranty policy. Performance problems due to operator error will not be covered by the Limited Warranty policy.
5. As this is a heating appliance, some changes in colour of surface finishes may occur. This is not a flaw and as such is not covered under this warranty.
6. Some minor expansion, contraction, or movement of certain parts and resulting noise, is normal and not a defect and, therefore, is not covered under this Limited Warranty.
7. Misuse includes over-firing. Over-firing this appliance can cause serious damage and will nullify the Limited Warranty.
8. The Limited Warranty will cover glass thermal breakage only and will not cover misuse of the stove glass, including but not limited to glass that is struck, has surface contaminants or has had harsh or abrasive cleaners used on it.
9. This warranty does not cover products made or provided by other manufacturers and used in conjunction with the operation of this stove without prior authorization from Sherwood Industries Ltd. The use of such products may nullify the Limited Warranty on this stove. If unsure as to the extent of this Limited Warranty, contact your authorized VistaFlame dealer before installation.
10. Sherwood Industries Ltd. will not be responsible for inadequate performance caused by environmental conditions.
11. The Limited Warranty does not cover installation and operational related problems such as use of downdrafts or spillage caused by environmental conditions. Environmental conditions include but are not limited to nearby trees, buildings, roof tops, wind, hills, mountains, inadequate venting or ventilation, excessive offsets, negative air pressures or other influences caused by mechanical systems such as furnaces, fans, clothes dryers etc.
12. The Limited Warranty is void if:
 - a) The stove has been operated in atmospheres contaminated by chlorine, fluorine or other damaging chemicals.
 - b) The stove is subject to submersion in water or prolonged periods of dampness or condensation.
 - c) Any damage to the unit, combustion chamber or other components due to water, or weather damage which is the result of, but not limited to, improper chimney/venting installation.
 - c) Salt air in coastal areas or high humidity can be corrosive to the finish; these environments can cause rusting. Damage caused by salt air or high humidity is not covered by the Limited Warranty.
13. Exclusions to the Limited Warranty include: injury, loss of use, damage, failure to function due to accident, negligence, misuse, improper installation, alteration or adjustment of the manufacturer's settings of components, lack of proper and regular maintenance, alteration, or act of God.
14. The Limited Warranty does not cover damage caused to the fireplace or stove while in transit. If this occurs, do not operate the stove and contact your courier and/or dealer.
15. Limited Warranty does not extend to or include firebox paint, door or glass gaskets with damage caused by normal wear and tear, or exterior paint discoloration or chipping, worn gaskets, etc.
16. The Limited Warranty does not include damage to the unit caused by abuse, improper installation, or modification of the unit.
17. Damage to plated surfaces caused by fingerprints, scratches, melted items, or other external scores and residues left on the plated surfaces from the use of abrasive cleaners or polishes is not covered in this warranty.
18. The Limited Warranty does not cover tarnish, discoloration or wear on the plated surfaces.

WARRANTY

19. The paint on the Metal Brick Liner may peel. This is due to the extreme conditions applied to the paint during normal usage. It is not a flaw and is not covered under warranty.
20. Sherwood Industries Ltd. is free of liability for any damages caused by the fireplace or stove, as well as inconvenience expenses and materials. The Limited Warranty does not cover incidental or consequential damages.
21. The Limited Warranty does not cover any loss or damage incurred by the use or removal of any component or apparatus to or from the VistaFlame fireplace or stove without the express written permission of Sherwood Industries Ltd. and bearing a Sherwood Industries Ltd. label of approval.
22. Any statement or representation of VistaFlame products and their performance contained in VistaFlame advertising, packaging literature, or printed material is not part of the Limited Warranty.
23. The Limited Warranty is automatically voided if the fireplace or stove's serial number has been removed or altered in any way. If the stove is used for commercial purposes, it is excluded from the Limited Warranty.
24. No dealer, distributor, or similar person has the authority to represent or warrant VistaFlame products beyond the terms contained within the Limited Warranty. Sherwood Industries Ltd. assumes no liability for such warranties or representations.
25. Sherwood Industries Ltd. will not cover the cost of the removal or re-installation of the stove, hearth, facing, mantels, venting or other components.
26. Labour to replace or repair items under this Limited Warranty will be covered per our warranty service fee reimbursement schedule. Labour rates are set per component and as such total labour costs may not be covered.
27. Sherwood Industries Ltd. is not liable for freight or labour on any stove replaced in-field and is not liable for travel costs for service work. In the event of in-home repair work, the customer will pay any in-home travel fees or service charges required by the Authorized Dealer.
28. At no time will Sherwood Industries Ltd. be liable for any consequential damages which exceed the purchase price of the unit. Sherwood Industries Ltd. has no obligation to enhance or modify any stove once manufactured (example: as a stove evolves, field modifications or upgrades will not be performed).
29. This Limited Warranty is applicable only to the original purchaser and it is non-transferable.
30. This warranty only covers VistaFlame products that are purchased through an authorized VistaFlame dealer.
31. If for any reason any section of the Limited Warranty is declared invalid, the balance of the warranty remains in effect and all other clauses shall remain in effect.
32. The Limited Warranty is the only warranty supplied by Sherwood Industries Ltd., the manufacturer of the stove. All other warranties, whether express or implied, are hereby expressly disclaimed and purchaser's recourse is expressly limited to the Limited Warranty.
33. Sherwood Industries Ltd. and its employees or representatives will not assume any damages, either directly or indirectly, caused by improper usage, operation, installation, servicing or maintenance of this stove.
34. Sherwood Industries Ltd. reserves the right to make changes without notice. Please complete and mail the warranty registration card and have the installer fill in the installation data sheet in the back of the manual for warranty and future reference.
35. Sherwood Industries Ltd. is responsible for stocking parts for a maximum of seven (7) years after discontinuing the manufacture or incorporation of the item into its products. An exception to this would be if an OEM supplier is not able to supply a part.

INSTALLATION DATA SHEET

The following information must be recorded by the installer for warranty purposes and future reference.

<p>NAME OF OWNER:</p> <p>_____</p> <p>ADDRESS:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>PHONE: _____</p>	<p>NAME OF DEALER:</p> <p>_____</p> <p>ADDRESS:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>PHONE: _____</p>
<p>MODEL: _____</p> <p>SERIAL NUMBER: _____</p> <p>DATE OF PURCHASE: _____ (dd/mm/yyyy)</p> <p>DATE OF INSTALLATION: _____ (dd/mm/yyyy)</p> <p><input type="checkbox"/> NATURAL GAS (NAT) <input type="checkbox"/> PROPANE (LPG)</p> <p>INLET GAS PRESSURE: _____ in wc</p> <p>MAIN BURNER ORIFICE: _____ # DMS</p> <p>PILOT ORIFICE # _____ OR _____ in diam.</p> <p>INSTALLER'S SIGNATURE:</p> <p>_____</p>	<p>NAME OF INSTALLER:</p> <p>_____</p> <p>ADDRESS:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>PHONE: _____</p>

MANUFACTURED BY:
SHERWOOD INDUSTRIES LTD.
6782 OLDFIELD RD. SAANICHTON, BC, CANADA V8M 2A3
www.envirofire.biz
December 3, 2007
C-11500